

**CITY OF DURHAM, NORTH CAROLINA**

**CONTRACT AND SPECIFICATIONS**

**FOR**



**CONTRACT ST-226**

**2006**

**Street Repairs and Resurfacing**

**Engineering Division, Department of Public Works  
101 City Hall Plaza, Durham, NC**

**CONTRACT ST-226**

**2006**

**STREET REPAIRS AND RESURFACING**

**ENGINEERING DIVISION  
DEPARTMENT OF PUBLIC WORKS  
CITY OF DURHAM, NORTH CAROLINA**

**MAYOR AND CITY COUNCIL**

**William V. Bell, Mayor**

**Howard Clement, III**  
**Diane Catotti**  
**Eugene A. Brown**

**John Best, Jr.**  
**Cora Cole-McFadden**  
**Thomas Stith, III**

**CITY STAFF**

Patrick Baker, City Manager  
Henry Blinder, City Attorney  
D. Ann Gray, City Clerk  
Kathryn R. Kalb, Director of Public Works  
R. Lee Murphy, Manager of Engineering  
Edward R. Venable, Assistant Manager of Engineering

# TABLE OF CONTENTS

## Page

Cover Sheet.....	
Title Sheet .....	
City of Durham Council and Personnel.....	
Table of Contents.....	
Definitions.....	1
Advertisement for Bids.....	2
General Instructions to Bidders.....	3
Special Instructions to Bidders .....	10
Priority Order of Construction.....	15
Proposal.....	19
Non-Collusion Affidavit of Prime Bidder.....	24
Non-Collusion Affidavit of Subcontractor.....	25
Bid Bond Form.....	26
Bid Bond Certification.....	27
Prime Contractor Privilege License-To Be Attached.....	28
Small Disadvantaged Business Enterprise Requirements.....	29
General Conditions.....	45
General Specifications.....	70
Project Special Conditions (NCDOT Specification Revisions).....	75
Supplemental Conditions.....	99
Contract.....	101
Performance Bond and Payment Bond.....	119
Certification of Bonds.....	122
Certification of Insurance-To Be Attached.....	123
Power of Attorney-To Be Attached.....	124
Certificate of Finance Officer.....	125
Appendix A – SDBE Reporting Forms and Listing.....	
Appendix B – Sales Tax Forms.....	
Appendix C – Stored Material Forms.....	
Affidavit for Payment of Stored Materials	
Stored Material Log	
Appendix D – Quantities .....	
Appendix E – Submittal Documents .....	
Attachment A - Submittal Register (Partially Completed)	
Attachment B – Submittal Register (Blank Form)	
Attachment C – Transmittal Form	
Attachment D – Instructions for Use of Transmittal Form	
Appendix F – Sketches .....	
ST-226-1	Pavement Schedule
ST-226-2	Pavement Transition Details
ST-226-3	Edge Treatment Details
ST-226-4	Typical Repair Section Details
ST-226-5	Milling Details and Notes
ST-226-6	Partial Depth Repair Section Notes
ST-226-7	Full Depth Repair Section Notes

## **DEFINITIONS**

Whenever terms as shown in quotation marks below are used throughout the Legal Notice, Instructions to Bidders, Proposal, Bid Bond, Specifications, Performance Bond, Contract, etc., the intent and meaning shall be interpreted as follows:

"City" .....	The City of Durham, North Carolina
"City Council" .....	The City Council of the City of Durham, North Carolina
"City Manager" .....	The City Manager of the City of Durham, North Carolina or a duly authorized agent
"Department" or "Engineer" .....	The Director of Public Works employed by the City Manager acting directly as a representative of the City of Durham or an authorized representative of the Director of Public Works assigned to the project.
"Inspector" .....	An authorized representative of the Engineer assigned to make any and all inspections of the work performed, acting under the direct supervision of the Engineer.
"Chemist" .....	An authorized representative of the City of Durham acting through the Department of Water Management.
"Laboratory" .....	The official Testing Laboratory of the City of Durham acting through the Department of Water Management.
"Bidder" .....	Any individual, firm or corporation duly licensed by law to perform such work and submitting a proposal for the Work contemplated.
"Contractor" .....	Party of the second part of the Contract, acting directly or through a duly authorized representative.
"Superintendent" or "Foreperson" ...	The Contractor's representative in charge of the work forces responsible for the Work in accordance with the specifications.

### **ADVERTISEMENT FOR BIDS**

The City of Durham will open formal sealed bids **submitted by pre-qualified bidders on Wednesday, 22 February, 2006 at 11:00 a.m. for Contract ST-226, Street Repairs and Resurfacing**, in the Engineering Conference Room, Department of Public Works, Third Floor, 101 City Hall Plaza, Durham, North Carolina. The project involves pavement repairs and resurfacing for City streets at various locations throughout the City of Durham, both inside and outside the City Limits.

**Bidders are strongly encouraged to attend the pre-bid conference on Wednesday, 8 February, 2006 at 11:00 a.m. in the Engineering Conference Room, Third Floor.**

**THE DEADLINE FOR SUBMITTING COMPLETED CONTRACTOR PRE-QUALIFICATION FORMS IS WEDNESDAY, 15 FEBRUARY, 2006 AT 4:00 P.M. THE FORMS ARE TO BE SUBMITTED TO THE CITY OF DURHAM EOEa OFFICE. ONLY BIDS SUBMITTED BY PRE-QUALIFIED BIDDERS WILL BE CONSIDERED.**

Specifications may be purchased in the Engineering Division (919)560-4326 for \$30 (Non-refundable). City of Durham Street Construction Specifications may be purchased for \$5 and Water and Sewer Construction Specifications may be purchased for \$10. The specifications may also be viewed and downloaded from the City of Durham Purchasing Web Site at the following address: <http://www.ci.durham.nc.us/departments/purchasing/bids.cfm>

Each bidder must be licensed under Chapter 87 of the N.C. General Statutes. The City Council of the City of Durham reserves the right to reject any or all bids. All bids must include a non-collusion affidavit.

Each bidder is advised that the contract work may be inspected and supervised by an Architect-Engineering firm under the direction of the City. The A-E firm may also be involved in the identification of specific repair areas and proposed method of repairs for the various streets.

## GENERAL INSTRUCTIONS TO BIDDERS

1. PROJECT LOCATION The work contemplated under the provisions of this Contract consists of the repairs and resurfacing of streets in various locations throughout the City of Durham.
2. CITY OF DURHAM STANDARDS. All work shall conform to City of Durham Standards. A copy of City of Durham Water & Sewer Construction Specifications may be purchased for \$10, and the City of Durham Street Construction Specifications may be purchased for \$5 from the Department of Public Works, 101 City Hall Plaza, Durham, North Carolina.
3. N.C. DEPARTMENT OF TRANSPORTATION STANDARDS: All work shall comply with the 2002 North Carolina Department of Transportation Standard Specifications, and applicable revisions, as referenced in these specifications. Copies of these documents may be obtained from the North Carolina Department of Transportation and are not provided by the City of Durham.
4. DOCUMENTS. Contract documents, including plans and technical specifications are on file in the Department of Public Works, Engineering Division, 101 City Hall Plaza, Third Floor, Durham, North Carolina. Copies of the Contract documents and the plan and profiles may be purchased for \$30 (non-refundable) for each set of documents and plans obtained.
5. PRIME CONTRACTOR QUALIFICATIONS. The Prime Contractor shall demonstrate that they have the ability to complete **a majority of all** portions of the Contract using **their own equipment and personnel**. The Prime Contractor shall include the following information in the Proposal in the spaces provided:
  - a. The number of years the Prime Contractor has been regularly engaged in similar Contract work and a list of projects they have completed with their equipment and personnel.
  - b. A list of the Prime Contractor's personnel experienced to do the Work including the foreperson or forepersons, or superintendent to be in charge of the Work, including the length of their experience with this type of work.
  - c. A list of the Prime Contractor's equipment in good condition and suitable for completion of the Contract.
  - d. If the Prime Contractor fails to demonstrate they have the ability to complete a majority of all portions of the Contract with their own equipment and personnel, the bid may be considered non-responsive.
  - e. The prime contractor shall be licensed under Chapter 87 of the North Carolina General Statutes as a General Contractor and holding a Highway classification. The prime contractor and all subcontractors shall obtain a City of Durham Privilege License from the Treasury Office located at 101 City Hall Plaza (919)560-4700.

6. BIDDER'S NAME. Each proposal shall contain the full name and address of each Bidder. When firms bid, the name of each member shall be signed and the firm name added, and the execution shall be done as more specifically stated herein under Section 10 below.
7. INTERPRETATION OF PLANS. If any person contemplating submitting a bid for the proposed Contract is in doubt as to the true meaning of any part of the plans, specifications, SDBE Requirements, or other proposed Contract documents, a written request for an interpretation thereof may be submitted to the Engineer. The person submitting the request will be responsible for its prompt delivery. Any interpretation of the proposed documents will be made only by addendum duly issued, a copy of which will be mailed or delivered to each person receiving a set of such documents. The Engineer will not be responsible for any other explanation or interpretation of the proposed documents.
8. SITE VISITS. Prospective Bidders should visit the site of the contemplated work to familiarize themselves with the surroundings. The location of all work is shown on the list of streets Appendix accompanying the specifications. The work consists of a combination of performing various repairs to the streets prior to resurfacing, adjusting structures and boxes, performing traffic control and performing resurfacing operations. The contractor is advised that not all the streets included in the listings may have repairs or resurfacing operation performed as the work performed in the field will be based on available funding.
9. PREBID AND PRE-CONSTRUCTION CONFERENCE. There will be a pre-bid conference for all prospective Bidders. The pre-bid conference will allow prospective Bidders an opportunity to address engineering and SDBE questions and to identify potential SDBE subcontractors.

There will be a pre-construction conference held with the successful Bidder and all known subcontractors prior to the issuance of a Notice to Proceed.
10. BID PROPOSAL. All bids submitted must be on the blank proposal forms herein provided, and the prices given shall be both in writing and in figures for the total of each item. In case of conflicting prices, the written price shall govern. No bid shall be accepted or considered unless the complete set of documents is included with the Contractor's proposal.
11. BID ENVELOPE. Bids shall be enclosed in a sealed envelope directed to **Bill Black, Public Works Engineering Division, Third Floor, 101 City Hall Plaza, Durham, North Carolina 27701.** If bids are sent by mail, FedEx, UPS, etc., the bid shall be enclosed in a sealed envelope and then enclosed in a mailing envelope or carton. **All** of the information listed below shall appear on the outside of the sealed envelope containing the bid. Failure to include the information listed below on the outside of the envelope containing the bid may result in the bid being considered non-responsive.

a. Project Name: **Proposals for Contract ST-226, Street Repairs and Resurfacing.**

b. Name of Bidder: \_\_\_\_\_

c. The above-named Bidder has enclosed (filled out as appropriate) the following items in



the bid: (Check all)

- i. Proposal**
- ii. Non-Collusion Affidavit of Prime Bidder**
- iii. Bid deposit or bid bond**
- iv. Privilege License of Prime Bidder**
- v. SDBE forms (E-101)**

**d. Bidder's NC General Contractor's License Number: \_\_\_\_\_(if applicable)**

12. **BID DEPOSIT.** No proposal shall be considered or accepted unless at the time of its filing the same shall be accompanied by a deposit of cash or a certified or cashier's check drawn on a bank or trust company insured by the Federal Deposit Insurance Corporation, in an amount equal to five percent (5%) of the amount of the proposal. The check shall be made payable to the City of Durham. Said deposit shall guarantee that the Contract will be entered into by the successful Bidder if the award is made. Such deposit of cash or certified or cashier's check may be held by the City until the successful Bidder has executed and delivered the Contract documents, including performance and payment bond, to the City of Durham and returned or kept in accordance with N.C.G.S. 143-129.
13. **BID WITHDRAWAL.** No Bidder may withdraw a bid within 90 days after the actual date of opening of such bids except to the extent, if any, that may be required by law.
14. **BID BOND.** In lieu of the cash deposit or certified or cashier's check mentioned above, the Bidder may file a bid bond in the same amount executed by a corporate surety authorized to execute such bonds in North Carolina and conditioned as provided by N.C.G.S. 143-129 and in the form attached to the Contract documents on file with the Engineer. Bid bond forms enclosed as part of the Contract documents must be properly executed at the time bids are submitted before bid will be considered. Properly executed Power of Attorney of the corporate surety's agent shall accompany such bond and be attached to the page provided therefore in the Contract documents. A bid bond form is included in the specification.
15. **PERFORMANCE/PAYMENT BONDS.** The Bidder to whom the award is made shall be required to enter into the proposed Contract with the City of Durham, North Carolina, and furnish a performance bond and a labor and materials payment bond acceptable to the City of Durham, and executed by a surety company licensed to do business in the State of North Carolina, in an amount equal to one hundred percent (100%) of the Contract sum. Performance Bond and Payment Bond forms are included at the end of this specification.
16. **PRIVILEGE LICENSE.** The bidder's attention is called to the requirement for a City of Durham Privilege License to be included in the proposal (To Be Attached). A Privilege License for all subcontractors must be filed within five (5) days after the bid opening. The prime contractor and all subcontractors shall obtain a City of Durham Privilege License from the Treasury Office located at 101 City Hall Plaza (919)560-4700.
17. **SDBE REQUIREMENTS.** Attention of bidders is particularly called to the requirement for affirmative action and Small Disadvantaged Business Enterprises (SDBE) participation. These

requirements are spelled out in detail under the section entitled Small Disadvantaged Business Enterprise Requirements.

a. **The bidders are required to complete the SDBE Participation Document E-101 forms and submit the completed forms with his or her bid.**

- b. Each bidder must submit a "Statement of Intent to Perform as a Subcontractor" for each SDBE subcontractor within five (5) days after the bid opening. The "Letter of Intent to Perform as a Subcontractor" can be found in the end of the SDBE Section and must be signed by each SDBE subcontractor. SDBE goal participation is calculated by multiplying the goal percentage times the bid price. A listing of City of Durham certified SDBE firms for this project can be found in the Appendix.

18. **PRICE OMISSION.** The omission of prices upon any item for which bids are asked or the tendering of any unbalanced bid may be the cause of the rejection of the bid submitted.

19. **ESTIMATED QUANTITIES.** The estimated quantities contained in the Proposal are for the purpose of comparing bids, and while they are close approximations, they are not guaranteed. Payment will be made on the basis of the Work as actually executed at the unit prices set forth in the executed Contract and under the provisions of such Contract.

20. **INCIDENTAL COSTS.** There shall be no additional compensation to the Contractor for materials, equipment, or work that is incidental to the successful completion of the Contract. Incidental costs, for example those costs associated with water supply, waste disposal, traffic control, testing, etc., are defined within the Specifications of this Document. It is the Contractor's responsibility to account for all such costs in the appropriate unit price proposed.

21. **NOTICE ON REIMBURSEMENT FOR SALES AND USE TAXES.** For purposes of this section, the phrase "Sales Taxes" means sales and use taxes paid to the State of North Carolina or to local governments in North Carolina. The City is entitled to refunds from the State of North Carolina of certain Sales Taxes. If the person, firm, or corporation (referred to as the Contractor) that performs under the contract with the City pays Sales Taxes, and those are Sales Taxes for which the State will grant a refund to the City, the Contractor is allowed to obtain reimbursement from the City by following these instructions. The City will reimburse the Contractor, and the City later obtains a refund from the State.

1. **What Sales Taxes are to be excluded from dollar amounts of a bid or proposal?** Reimbursable Sales Taxes as described below are to be excluded from bids and proposals -- whether in lump sum amounts, units prices, extensions, or otherwise.
2. **What Sales Taxes are reimbursable?** The rule is that Sales Taxes are reimbursable if they are paid on purchases of building materials, supplies, fixtures, and equipment that become a part of or annexed to any building or structure that is owned or leased by the City and is being erected, altered, or repaired for use by the City. Under that rule, City infrastructure (streets, sidewalks, sewer and water lines and pipes, etc.) is generally held to be "structure" so as to allow reimbursement for Sales Taxes paid on materials and fixtures that become a part of or are annexed to it. Examples of taxes that **cannot** be reimbursed are taxes paid for scaffolding, tools, equipment repair parts, equipment rentals, forms for concrete, or fuel to operate machinery or equipment.

3. **How is a Contractor to be reimbursed for Sales Taxes?** The Contractor must complete and submit the Reimbursable Sales and Use Tax Statement form in the contract documents (see Appendix). The Contractor shall also provide invoices to substantiate the information on that form. If the State refuses to refund any such Sales Tax to the City, or if after a refund is made, the City is told to return a refund to the State (both types referred to as “failed refunds”), the Contractor shall upon demand repay the City for the amount of the failed refunds.
  4. **When is a Contractor allowed to seek reimbursement?** The Contractor may seek reimbursement separately from, but at the same time as, the application for payment is made for the properties that were taxed. The Contractor shall not file for reimbursement for Sales Taxes before the Contractor has the right to file an application for payment for the properties that were taxed.
  5. **How are Sales Taxes paid by a subcontractor handled?** The form titled “Reimbursable Sales and Use Tax Statement by Subcontractor” is used. The subcontractor completes and signs that form for its purchases, and then gives the form to the Contractor. The Contractor submits it along with the Contractor’s pay application for the properties listed on that form. The City will make the reimbursement payable to the Contractor. Except for those differences, the answers to all the questions on this page still apply whether the Subcontractor or the Contractor completes and signs the form.
- 
21. **CONTRACT ADDITIONS.** The City reserves the right to extend the Contract upon the same terms and at the same unit prices, provided extensions shall not exceed in cost fifty percent (50%) of the original Contract price. Any addition of new projects will be only by mutual agreement between the City and the successful Bidder.
  22. **EROSION CONTROL MATTING.** Erosion control matting shall be used in **all residential areas** and other areas as determined by the Inspector to minimize soil erosion and siltation. The Contractor is responsible for proper installation of the erosion control matting to minimize erosion and to establish an acceptable growth of grass in a timely manner.
  23. **FORCE ACCOUNT WORK.** The Contractor’s attention is directed to the City of Durham Water and Sewer Construction Specifications for information on the method of payment for the performance of extra work on City contracts. Prior to starting work, the Contractor shall submit information on labor wage rates and equipment rates for all labor and equipment to be used in the performance of the Work in accordance with the Water and Sewer Construction Specifications. These rates shall be used to compensate the Contractor for all force account work on the project. The Contractor shall only be compensated for labor and equipment used in the performance of extra work for force account work at the labor wage rates and equipment rates submitted. **There shall be no adjustments to the rates submitted and no compensation for idle equipment in accordance with the Construction Specifications.**
  24. **INCLEMENT WEATHER DELAY DAYS.** All work included under this contract is

to be completed within the time limit as set forth in the proposal. Extensions of time will be granted for inclement or wet weather days that exceed the normally expected inclement or wet weather days for that time of year and which delay critical work activities that are scheduled to be performed during that period as noted on the approved progress schedule. Normal monthly weather conditions and associated inclement or wet weather days for the work area are as determined by the historic climatologic weather information compiled by the National Oceanic and Atmospheric Administration (NOAA). The contractor is to include the normal number of inclement weather days for each month in their schedule. Time extensions for weather will only be granted for those days of adverse weather delays in excess of the normal weather delays which delay schedule critical work features as indicated on the approved progress schedule.

25. LIQUIDATED DAMAGES: Liquidated damages will be assessed for each day that this contract is delayed in its completion beyond the required contract completion date. Liquidated damages for this contract will be \$400 per calendar day as specified in the contract documents.
26. DELAYS DUE TO THE CITY OF DURHAM CITY COUNCIL. Should this work be delayed by the City Council, the City Council shall extend the time of completion by an amount equal to said delay. The said delay shall not constitute claim for damages nor for loss of anticipated profits. Should the amount of work to be done under this contract be increased beyond that agreed upon herein, the time limit shall be increased as stipulated in the contract portion of these specifications. Either the City or Contractor may request time extensions for due cause. Liquidated damages for this contract will be \$400 per day as specified in the contract documents.
27. CORPORATION, PARTNERSHIP OR INDIVIDUAL BIDDER. The bidder's attention is called to the fact that a separate provision is made for signing the proposal for a corporation, a partnership, or an individual. Care should be taken that he/she sign and execute the contract in accordance with his/her classification. If the proposal is made by a corporation, the president or vice president must sign, attested by the secretary or assistant secretary and the corporate seal affixed thereto. If the proposal is made by an individual, his/her name and office address must be shown. If made by a firm or partnership, the name and office address of the firm or partnership must be shown.
28. NON-COLLUSION AFFIDAVITS. The bidder's attention is called to the fact that non-collusion affidavits are included as a part of the proposal. The affidavit of the prime bidder must be filled out as a part of the bid. Affidavits of all subcontractors must be filed within five (5) days after the bid opening.
29. CONTRACTOR PRE-QUALIFICATION. The Contractor's attention is directed to the pre-qualification requirement of Bidders. The Contractor must be pre-qualified with the City at the time of the bid opening. Bidders must submit the completed Pre-qualification Forms to the City of Durham Equal Opportunity/Equity Assurance Department, by the deadline for submission of these forms as shown in the Advertisement for Bids, in order for City review of such requests to be completed prior to the bid opening. The Pre-qualification Forms are included in this document. All questions concerning Pre-

qualification should be directed to the City of Durham Equal Opportunity/Equity Assurance Department (919) 560-4180.

- 30. NOTICE UNDER THE AMERICANS WITH DISABILITIES ACT (ADA).** The City of Durham will not discriminate against qualified individuals with disabilities on the basis of disability in the City's services, programs, or activities. The City will generally, upon request, provide appropriate aids and services leading to effective communication for qualified persons with disabilities so they can participate equally in the City's programs, services, and activities. The City will make all reasonable modifications to policies and programs to ensure that people with disabilities have an equal opportunity to enjoy all City programs, services, and activities. Anyone who requires an auxiliary aid or service for effective communications, or a modification of policies or procedures to participate in the City program, service, or activity, should contact the office of Guillermo Rodriguez, RLA, ADA Coordinator, Voice: 919-560-4197 x237, TTY: 919-560-4809; [guillermo.rodriguez@durhamnc.gov](mailto:guillermo.rodriguez@durhamnc.gov), as soon as possible but **no later than 48 hours** before the scheduled event.

## SPECIAL INSTRUCTIONS TO BIDDERS

1. SDBE DOCUMENTS. The Contractor's attention is directed to the revised M/WBE program which has been replaced by the SDBE program. Revised documents are included in the Small Disadvantaged Business Enterprise (SDBE) section of this specification. All questions concerning the SDBE Documents and Pre-qualification should be directed to the City of Durham EO/EA Office at (919) 560-4180.
2. CONSTRUCTION VIDEO. The Contractor will be required to videotape each city street project along the entire route of each project utilizing the DVD and a VHS format. The original copy of the DVD and videotape shall be given to the Engineer prior to beginning construction activities. The video shall clearly identify all existing above ground site conditions prior to starting work.
3. STREET REPAIRS AND RESURFACING: The City has limited funding for this project. The list of streets to be repaired and resurfaced reflects the City's estimate of the work that can be accomplished with this funding. This estimate is also dependent on the amount of repairs that may be required for the existing streets prior to the resurfacing operation. The less extensive the repairs, the more streets that can be resurfaced. The City reserves the right to add or subtract streets to this contract, compensating for the work using the established unit prices, without any additional compensation to the Contractor.
4. NOTICE OF CONTRACT PROVISION CHANGES AND UPDATES: The Contractor is advised that this contract includes numerous changes, revisions and updates from prior City of Durham contracts, some of which are identified in the following listing:
  - a. Contractor testing, layout, inspection, submittal management, and quality control requirements have been added to the specifications. There are provisions for the contractor to perform the surveying and layout for the project, to perform the required quality control testing and reporting, to provide daily reports of construction activities, to manage the submission and approval of submittals, and for the contractor to be responsible and perform additional quality control activities as outlined in this contract.
  - b. Revised provisions for Changes, Disputes, Mobilization and De-mobilization, Progress Schedules and Payments to Contractor have been added to the specifications.
  - c. NCDOT provisions for price adjustment for asphalt have been added as have current NCDOT Super pave requirements and amendments and traffic control provisions.
5. EDGE TREATMENT: The General Specifications contain detailed instructions on the treatment of the resurfacing pavement edge. The details are provided for full depth, feathered and milled edges.
6. MOTORIST OBSTACLES: The General Specifications contain detailed instructions on painting the exposed vertical edges of adjusted structures and milled edges. Orange paint is required to improve visibility. Also detailed are the requirements for handling of adjustments completed in advance of resurfacing.

7. PAVEMENT RESTORATION. All pavement restoration shall comply with the applicable City of Durham specifications or North Carolina Department of Transportation specifications as shown on the plans or as instructed by the Inspector.
8. MISCELLANEOUS COSTS. All miscellaneous costs required to complete the Work as indicated on the drawings shall be reflected in the unit prices in the Proposal. There shall be no compensation for furnishing materials or performance of work required to complete the work as indicated on the drawings other than what is outlined in the Proposal.
9. COSTS INCLUDED IN BID PRICES. The Bidder's proposal shall reflect all costs associated with the following:
  - a. Removing all signs and fencing required for construction activities and re-erecting after completion of the work. Items damaged by the Contractor during construction shall be replaced by Contractor at his or her expense.
  - b. Installation, maintenance and removal of all erosion control measures.
  - c. Providing and maintaining traffic control, including detouring of traffic where required for performance of work.
  - d. Coordinating all work with the City of Durham.
  - e. Furnishing all materials and performing all work required for the complete installation of the work as required by the Contract drawings and specifications.
10. PRECAUTIONS All miscellaneous costs required to complete the Work as indicated shall be reflected in the unit prices in the Proposal. The Contractor shall take sufficient precautions to protect the public or private property being served by the work involved. The Contractor shall protect, indemnify, and save harmless the City from any and all claims, damages, or expenses that may be incurred as a result of such failure to protect such property. The Contractor shall restore at his own expense, such property to a condition similar or equal to that which existed before such damages or injuries, by cleaning, repairing, rebuilding, or replacing that which was damaged, as may be required by the Engineer.
11. CHECK DAMS. Check dams must be constructed in accordance with NCDOT standard and require filter fabric installed beneath the stone. The cost of filter fabric is included in the pricing of the check dam.
12. PUBLIC ADVISORY. Prior to the prosecution of work, the Contractor shall provide a one-week advance written notice to all individuals, homeowners, business owners, utilities, and others along the line of construction who may be affected by any aspect of the work that is contemplated. Such notice may be delivered by door contact, door knob hanger, or letter and shall briefly describe the nature and estimated timetable of the work and shall provide any additional information or instructions that may be desirable or necessary. The notice shall also include the name and telephone number of the contact person for further information related to the project. **A proposed draft of the written notice shall be submitted by the Contractor to the Engineer for his approval prior to the initiation of any work.**
13. PAVEMENT REPAIRS. The Contractor shall be required to make all pavement repairs and pavement replacement within 48 hours from the completion of the repair. Replacement of the

pavement as covered under this contract shall be under the direct inspection of a City of Durham Engineering Inspector.

14. OTHER INSPECTION. The Contractor is advised that the City may also use consultant inspection services for the direct inspection and administration of the work that is to be performed under this contract. Such firm is acting on behalf of the City of Durham.
15. EXISTING UTILITIES. The Contractor will be required to uncover all existing utilities where there are crossings of proposed utilities. This work will be one week prior to the start of construction of the proposed utilities. The cost of this work should be incorporated into the unit prices in the proposal.
16. TRAFFIC CONTROL. It is the Contractor's responsibility to provide all necessary traffic control and signage and provide for maintenance of traffic for the work associated with this project. The cost for this work is to be included in the bid item included in the contract or in the existing unit prices if no bid item is included.
17. MOBILIZATION, PROGRESS SCHEDULE AND DE-MOBILIZATION: The total cost bid for mobilization, schedule and de-mobilization is not to exceed ten (10) percent of the total contract bid. All costs for mobilization and de-mobilization shall be included in the Contract unit price. There shall be no additional compensation for mobilization and no adjustments to the unit prices based on changes in the scope of work, including, but not limited to, any additions to the work on the contract. The contractor will be paid in increments based on the status of the actual mobilization effort. An amount equal to fifteen (15) percent of the total mobilization cost shall be withheld until the physical completion of the project and completion of punch-list items and removal of all equipment and temporary construction for project de-mobilization is complete. An amount equal to twenty (20) percent of the total mobilization cost shall be withheld for payment of the progress schedule development and monthly updates as outlined in this contract. The breakdown of this bid item is as follows:
  - Mobilization – Installments to reflect - A Total of 65%
  - Schedule Submission and updates - A Total of 20%
  - De-mobilization and completion of punch list - A Total of 15%

100%

Any amount that the contractor has bid in excess of the amounts noted above will be retained by the City and paid on the final payment estimate.

18. SURVEY LAYOUT OF WORK: The Contractor shall lay out its work from the City of Durham established base lines and/or control points and/or bench marks indicated on the drawings and shall be responsible for all measurements in connection with the layout. The Contractor shall furnish, at its own expense, all stakes, templates, platforms, equipment, tools, materials, and labor required to lay out any part of the work. The Contractor shall be responsible for executing the work to the lines and grades that may be established or indicated by the contract plans and specifications. The Contractor shall also be responsible for maintaining and preserving all stakes, benchmarks, controls and other marks established for the layout of the project. The Contractor shall maintain complete and accurate field notes, sketches, recordings and computations required in establishing the necessary horizontal and vertical control for the project.



All surveys and layout shall be made by personnel of a professional engineering and/or surveying firm that is experienced in the practice of such work. Prior to performing any survey work for the project, the Contractor shall forward information pertaining to the personnel and/or firm performing the survey and layout work to verify that they satisfy the above requirements. All survey data shall be recorded in accordance with accepted industry standards and as approved by the City of Durham. All of the layout data shall be available at all times during the course of the work for ready examination and use by the Contractor and the City of Durham.

Promptly upon completing a layout or survey, the Contractor shall provide a copy of all field notes and other records pertaining to this work to the City of Durham. The notes shall also bear evidence of being performed or reviewed by the professional and/or surveying firm.

There is no separate measurement or payment for this work and the cost for this work shall be included in existing bid items.

**19. CONTRACT DRAWINGS AND SPECIFICATIONS:**

- a. The City of Durham will provide to the Contractor, without charge, five (5) sets of contract drawings and specifications, except publications incorporated into the contract and technical provisions by reference, in electronic or paper media as requested by the Contractor, subject to approval by the City of Durham.
- b. The Contractor shall:
  - (1) Check all drawing furnished immediately upon receipt;
  - (2) Compare all drawings and verify the figures given before laying out the work;
  - (3) Promptly notify the City of Durham of any discrepancies;
  - (4) Be responsible for any errors that might have been avoided by complying with this paragraph (b) above; and
  - (5) Reproduce and print additional contract drawings and specifications, other than those noted above, as may be required for their use.
- c. In general, the following rules of precedence of the specifications and drawings shall apply with precedence listed from highest to lowest:
  - (1) The project specifications shall govern over the plans;
  - (2) Project special provisions or instructions;
  - (3) Project drawings; and full size drawings shall govern over half-size drawings; and the Contractor shall follow figures marked on drawings in preference to scale measurements;
  - (4) City of Durham Standards and Specifications;
  - (5) N.C. Department of Transportation Standard Specifications;
  - (6) Other specification and drawing references;
  - (7) Omissions from the drawings or specifications or the misdescription of details of work that are manifestly necessary to carry out the intent of the drawings and specifications, or that are customarily performed, shall not relieve the Contractor from performing such omitted or misdescribed details of the work. The Contractor shall perform such details as if fully and correctly set forth and described in the drawing and specifications.
  - (8) The work shall conform to the specifications and the contract drawings identified on the following index of drawings:

Drawing File Number: City of Durham – Department of Public Works

<u>Plate Number</u>	<u>Title / Description</u>	<u>Date</u>	<u># Drawings</u>
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<u>Sketch Number</u>	<u>Description</u>
ST-226-1	Pavement Schedule
ST-226-2	Pavement Transition Details
ST-226-3	Edge Treatment Details
ST-226-4	Typical Repair Section Details
ST-226-5	Milling Details and Notes
ST-226-6	Partial Depth Repair Section Notes
ST-226-7	Full Depth Repair Section Notes

## Priority Order for Schedule of Construction

Listed below are the listing of streets and order of priority that may be constructed under this contract. The streets are listed in order of priority due to pavement condition rating and due to proximity of the streets in the neighborhood. Streets are listed in a north to south priority order of orientation to allow an orderly and more economic progression of work flow by the contractor. Should the contractor have multiple paving operations, the order of priority for the streets may be revised subject to approval by the Engineer. In such an instance, a preference will be made for a south to north progression if desired by the contractor. This listing is structured in this manner to ensure that the streets with the lowest rating are repaired and resurfaced first and that, when performing this work, connecting streets in the neighborhood that are of similar poor condition are also corrected. It should be noted that each priority order on the schedule below may include streets from pavement condition ratings of 0 to ratings of 60. The Contractor is also alerted to the fact that not all the streets on this list may be repaired and resurfaced under this contract as the actual work that will be performed will be dependent on the extent of the repairs that are necessary prior to resurfacing and to the total available funding of this contract.

Priority Code	Street	TP	BLK	FROM	TO	LEN	WI	SY
1	Reigalwood	Dr.	4808	Stacy Dr.	Wensley Dr.	652	22	1,593.78
1	Northbury	Cir.	4816	Atterbury Ln.	Cul De Sac	432	22	1,056.00
1	Kendridge	Dr.	4900	Atterbury Ln.	Hideaway Ln.	459	22	1,122.00
1	Reigalwood	Dr.	4904	Wensley Dr.	Mohegan Dr.	598	22	1,461.78
1	Kendridge	Dr.	4800	Open Air Camp Rd.	Atterbury Ln.	895	22	2,187.78
1	Kendridge	Dr.	5000	Hideaway Ln.	Grady Dr.	415	22	1,014.44
2	Pinetrail	Dr.	5100	Donphil Rd.	Ponderosa Ln.	457	20	1,015.56
2	Pinetrail	Dr.	5024	Pine Valley Dr.	Donphil Rd.	420	20	933.33
2	Pinetrail	Dr.	5000	Latta Rd.	Pine Valley Dr.	619	20	1,375.56
2	Pinetrail	Dr.	5118	Ponderosa Ln.	Dead End	320	20	711.11
3	Parkview	Dr.	504	Lockhaven Dr.	Carreras Ln.	1169	22	2,857.56
3	Parkview	Dr.	600	Carreras Ln	Kinlock Dr.	486	22	1,188.00
3	Brooklane	Dr.	4606	Wildwood Dr.	Bonhill Dr.	1168	22	2,855.11
4	Imperial	Dr.	1500	Laurent Dr.	Memory Ln.	664	22	1,623.11
4	Laurent	Dr.	5300	Memory Ln.	Imperial Dr.	820	22	2,004.44
4	Memory	Ln.	5300	Laurent Dr.	Imperial Dr.	577	22	1,410.44
4	Imperial	Dr.	1310	Cul De Sac	Laurent Dr.	940	22	2,297.78
4	Laurent	Dr.	5400	Imperial Dr.	Cheshire Bridge Dr.	246	22	601.33
5	Twin Oak	Dr.	200	Natchez Way	Charleston Dr.	382	22	933.78
5	Deerfield	Ave.	322	Reese Rd.	Crestview Dr.	463	22	1,131.78
5	Twin Oak	Dr.	212	Charleston Dr.	Vicksburg Ln.	408	22	997.33
5	Twin Oak	Dr.	130	Plantation Dr.	Natchez Way	773	22	1,889.56
6	Lazy River	Ln.	4100	Cul De Sac	Shadebush Dr.	444	22	1,085.33
6	Berg	Pl.	2	Meadston Dr.	Cul De Sac	171	22	418.00
6	Meadow Lark	Pl.	100	High Meadow Rd.	Cul-de-sac	189	29	609.00
6	Wake Robin	Pl.	100	Omega Rd.	Cul-de-sac	157	25	436.11
7	Hitchcock	Dr.	2518	Camellia Dr.	Fashion Pl.	391	28	1,216.44
7	Camellia	Dr.	2500	Hitchcock Dr.	Bogarde St.	442	28	1,375.11
7	Camellia	Dr.	2406	Astor Dr.	Hitchcock Dr.	465	28	1,446.67
7	Camellia	Dr.	2402	Pinetree Ct.	Astor Dr.	195	28	606.67

Priority Code	Street	TP	BLK	FROM	TO	LEN	WI	SY
8	Harrigan	Ct.	2	Glassgow St.	Cul De Sac	182	22	444.89
9	Allgood	St.	1114	Pineland Ave.	Dead End	235	28	731.11
10	Hammond	St.	700	Dominion St.	Lindbergh St.	697	28	2,168.44
11	Leon	St.	1300	N. Buchanan Blvd.	Haverford St.	713	34	2,693.56
11	Leon	St.	1400	Haverford St.	Broad St.	546	34	2,062.67
11	Leon	St.	1100	Lednum St.	N. Buchanan Blvd.	484	34	1,828.44
11	Leon	St.	900	Lorain Ave.	Lednum St.	586	34	2,213.78
12	Hudson	Ave.	1300	N. Buchanan Blvd.	Haverford St.	680	28	2,115.56
13	W. Wilson	St.	2500	Georgia Ave.	Hillandale Rd.	960	28	2,986.67
14	Kismet	Dr.	4000	Cul De Sac	Talcott Dr.	172	22	420.44
14	Talcott	Dr.	4000	Kismet Dr.	Westfield Dr.	395	24	1,053.33
14	Kismet	Dr.	4100	Talcott Dr.	Cul De Sac	316	22	772.44
14	Talcott	Dr.	4100	Westfield Dr.	Constitution Dr.	890	24	2,373.33
15	Arbor	St.	1406	W. Knox St.	Everett Pl.	324	28	1,008.00
15	Arbor	St.	1412	Everett Pl.	Englewood Ave.	324	28	1,008.00
15	Green	St.	500	Washington St.	Rand St.	866	28	2,694.22
15	Norton	St.	1306	W. Knox St.	Englewood Ave.	666	27	1,998.00
15	Norton	St.	1400	Englewood Ave.	W. Club Blvd.	729	27	2,187.00
15	Green	St.	308	Glendale Ave.	Edgevale Rd.	364	28	1,132.44
15	Green	St.	800	Ruffin St.	N. Duke St.	755	27	2,265.00
15	Green	St.	706	Rand St.	Ruffin St.	291	28	905.33
16	Anita	St.	400	Hollywood St.	Shawnee St.	293	28	911.56
16	Hollywood	St.	1600	Anita St.	E. Markham Ave.	610	28	1,897.78
16	Hargrove	St.	214	Bay St.	North St.	306	26	884.00
17	S. Joyland	St.	112	Holloway St.	Tuckawanna Ave.	471	28	1,465.33
17	Wedgedale	Ave.	2600	S. Joyland Ave.	S. Adams St.	700	28	2,177.78
17	S. Joyland	St.	220	Tuckawanna Ave.	Wedgedale Ave.	453	28	1,409.33
17	Redgate	Dr.	3400	Larch Ct.	Gibson Rd.	563	28	1,751.56
18	Alma	St.	1300	Juniper St.	Woodbark Ln.	208	16	369.78
18	Greenbriar	Rd.	1614	Fairfax Rd.	Robinhood Rd.	1032	28	3,210.67
18	Juniper	St.	1504	Alma St.	N. Guthrie Ave.	349	34	1,318.44
19	N. Elizabeth	St.	308	Holloway St.	Carlton Ave	385	55	2,352.78
19	N. Elizabeth	St.	400	Carlton Ave.	Gilbert St.	91	45	455.00
19	N. Elizabeth	St.	174	Taylor St.	Liberty St.	244	55	1,491.11
19	N. Elizabeth	St.	100	E. Main St.	Commerce St.	408	55	2,493.33
20	N. Holman	St.	300	Worth St.	Franklin St.	175	26	505.56
20	N. Holman	St.	400	Franklin St.	Wall St.	193	26	557.56
20	N. Holman	St.	200	Morning Glory Ave.	Worth St.	208	26	600.89
20	N. Holman	St.	500	Wall St.	Taylor St.	225	26	650.00
21	Morven	Pl.	1206	Dead End	S. Holman St.	275	12	366.67
21	S. Holman	St.	106	E. Main St.	Angier Ave.	458	28	1,424.89
21	Angier	Ave.	1008	Laurel St.	Stokes St.	450	30	1,500.00
21	Angier	Ave.	904	S. Elm St.	Dale St.	304	30	1,013.33
21	S. Holman	St.	106	E. Main St.	Morning Glory Ave.	455	28	1,415.56
21	Angier	Ave.	800	E. Main St.	S. Elm St.	669	35	2,601.67
21	Angier	Ave.	910	Dale St.	Lyon St.	130	30	433.33
21	Angier	Ave.	1100	Stokes St.	S. Alston Ave.	342	30	1,140.00

Priority Code	Street	TP	BLK	FROM	TO	LEN	WI	SY
21	Angier	Ave.	1000	Lyon St.	Laurel St.	126	30	420.00
22	Pineburr	Pl.	600	Cul De Sac	Greyson Dr.	153	22	374.00
23	Goldendale	Dr.	1100	Trentwood Ct.	Yarrow Dr.	168	22	410.67
23	Goldendale	Dr.	1106	Yarrow Dr.	Cul De Sac	196	22	479.11
23	Goldendale	Dr.	900	Cul De Sac	Stanwood St.	153	22	374.00
23	Goldendale	Dr.	1002	Stanwood St.	Trentwood Ct.	517	22	1,263.78
24	Stoneybrook	Dr.	3404	Windgate Dr.	Beaver Pl.	666	28	2,072.00
24	Stoneybrook	Dr.	3152	Marigold Pl	W. Carver St.	313	28	973.78
24	Stoneybrook	Dr.	3204	W.Carver St.	Guernsdale St.	569	28	1,770.22
24	Stoneybrook	Dr.	3504	Beaver Pl.	Digby Pl.	1005	28	3,126.67
24	Stoneybrook	Dr.	3304	Guernsdale St.	Windgate Dr.	809	28	2,516.89
25	Logan	St.	1312	Rachel Ln.	Milan St.	541	28	1,683.11
25	Milan	St.	1400	Logan St.	Jessica Ct.	811	28	2,523.11
25	Logan	St.	1500	Faucette Ave.	Winburn Ave.	499	20	1,108.89
25	Logan	St.	1604	Winburn Ave.	Melrose Ave.	461	20	1,024.44
25	Logan	St.	1410	Christopher Ct.	Faucette Ave.	152	28	472.89
25	Logan	St.	1300	Joci Ct.	Rachel Ln.	284	28	883.56
26	CHARLES	ST	2100	S. ROXBORO ST	W. CORNWALLIS	2,070	28	6,440.00
26	MOLINE	ST	200	S. ROXBORO ST	BERN ST	477	26	1,378.00
26	MOLINE	ST	300	BERN ST	CONCORD ST	533	26	1,539.78
27	LODGE	ST	108	S. ROXBORO ST	SCOUT DR	401	28	1,247.56
27	WHITE OAK	AV	2600	W. PILOT ST	DALLAS ST	199	28	619.11
27	NORMADY	ST	300	DALLAS ST	S. ROXBORO ST	391	28	1,216.44
27	W. WEAVER	ST	200	THERESA ST	DEADEND	917	28	2,852.89
27	W. ALTON	ST	108	OTIS ST	THERESA ST	331	28	1,029.78
27	E. ALTON	ST	106	OTIS ST	JANET ST	257	28	799.56
27	THERESA	ST	2404	W. WEAVER ST	W. ALTON ST	442	28	1,375.11
27	RED OAK	AV	300	NORMANDY ST	DALLAS ST	378	28	1,176.00
27	E. WEAVER	ST	2500	E. ALTON ST	WAYNE CR	448	28	1,393.78
27	RED OAK	AV	500	FAYETTEVILLE ST	LANE ST	690	28	2,146.67
27	RED OAK	AV	1100	CROWELL ST	MEDINA ST	427	28	1,328.44
27	RED OAK	AV	200	OTIS ST	WHITE OAK AV	317	28	986.22
27	RED OAK	AV	602	LANE ST	DAKOTA ST	435	28	1,353.33
27	NORMADY	ST	204	RED OAK AV	DALLAS ST	532	28	1,655.11
27	RED OAK	AV	206	WHITE OAK AV	NORMANDY ST	381	28	1,185.33
27	E. ALTON	ST	300	E. WEAVER ST	CUL DE SAC	459	28	1,428.00
27	W. WEAVER	ST	100	OTIS ST	THERESA ST	329	28	1,023.56
27	WHITE OAK	AV	2608	DALLAS ST	DEADEND	90	28	280.00
27	E.WEAVER	ST	2512	WAYNE CR	E. PILOT ST	391	28	1,216.44
28	LINCOLN	ST	2202	MARTHA ST	BURLINGTON AV	394	28	1,225.78
28	LINCOLN	ST	2100	CECIL ST	MARTHA ST	312	28	970.67
28	LINCOLN	ST	1700	DUPREE ST	E. LAWSON ST	372	30	1,240.00
28	LINCOLN	ST	2400	HOPE AV	DAKOTA ST	569	28	1,770.22
28	LINCOLN	ST	2300	BURLINGTON AV	HOPE AV	339	28	1,054.67
29	ROOSEVELT	ST	500	FAYETTEVILLE ST	LANE ST	688	28	2,140.44
29	UTAH	ST	400	FAYETTEVILLE ST	ATLANTIC ST	349	28	1,085.78
29	ATLANTIC	ST	2508	COLUMBIA AV	RED OAK AV	1,147	28	3,568.44

Priority Code	Street	TP	BLK	FROM	TO	LEN	WI	SY
30	DELRAY	ST	822	ANCROFT AV	DEADEND	167	28	519.56
30	DELRAY	ST	1000	ANCROFT AV	ZEPHER PL	648	28	2,016.00
30	ZEPHER	PL	2	CUL DE SAC	DELRAY ST	154	28	479.11
30	DELRAY	ST	900	ZEPHER PL	ANCROFT AV	312	28	970.67
30	ANCROFT	AV	1000	DELRAY ST	DELRAY ST	606	28	1,885.33
30	BRANDON	RD	800	LANSING AV	CHOWAN AV	1,143	20	2,540.00
30	HARRINGTON	PL	2	KIRBY ST	CUL DE SAC	278	20	617.78
30	KIRBY	ST	2700	DEADEND	JEROME RD	139	20	308.89
30	ANCROFT	AV	1100	DELRAY ST	RIDDLE RD	237	28	737.33
31	BALTIC	AV	2106	CAPPS ST	CROWELL ST	655	28	2,037.78
31	NIXON	ST	1800	ATHENS AV	DEADEND	666	28	2,072.00
31	MATILENE	AV	2000	HEARTHSIDE ST	CAPPS ST	722	28	2,246.22
31	LANTERN	PL	1500	BACON ST	POMONA DR	293	28	911.56
31	EMERSON	PL	2200	CROWELL ST	CHICAGO ST	776	28	2,414.22
31	BACON	ST	1508	HEARTHSIDE ST	LANTERN PL	255	28	793.33
31	HEARTHSIDE	ST	1100	BACON ST	SARGENT PL	756	28	2,352.00
31	HEARTHSIDE	ST	1522	MATILENE AV	ATHENS AV	295	28	917.78
31	HEARTHSIDE	ST	1216	WELCH PL	BACON ST	497	28	1,546.22
31	NIXON	ST	1526	PRITCHARD PL	S. ALSTON AV	954	28	2,968.00
31	HEARTHSIDE	ST	1300	BACON ST	SAVANNAH AV	838	28	2,607.11
31	EMERSON	PL	2200	CHICAGO ST	WINTERGREEN PL	107	28	332.89
31	HEARTHSIDE	ST	1200	SARGENT PL	WELCH PL	338	28	1,051.56
32	PINECREST	RD	1600	SEVIER ST	MARION AV	453	28	1,409.33
32	WOODBURN	RD	1500	SEVIER ST	SPENCER ST	488	28	1,518.22
32	WOODBURN	RD	1726	WOODBURN RD	WOODBURN RD	319	28	992.44
32	DEKALB	ST	2800	W. CORNWALLIS RD	MCDOWELL RD	777	28	2,417.33
32	WOODBURN	RD	1600	SPENCER ST	MONTGOMERY ST	426	28	1,325.33
32	SEVIER	ST	2500	PINECREST RD	MARION AV	1,079	28	3,356.89
32	SEVIER	ST	2606	MARION AV	WOODBURN RD	394	28	1,225.78
32	WOODBURN	RD	1700	MONTGOMERY ST	WOODBURN RD	413	28	1,284.89
33	ROLLING MEADOWS	DR	5000	CUL DE SAC	BONHAM CT	445	22	1,087.78
34	HUNTSMAN	DR	1100	LITTLE CREEK RD	AUBURNDALE DR	1,228	22	3,001.78
34	HUNTSMAN	DR	918	BOUNTY LN	LITTLE CREEK	844	22	2,063.11
34	HUNTSMAN	DR	804	GRANDALE DR	BOUNTY LN	870	22	2,126.67
35	BURBANK	CR	2	EUCLID RD	EUCLID RD	400	21	933.33
35	EUCLID	RD	1804	EMERALD CR	EMERALD CR	594	23	1,518.00
35	HALEDON	CR	2	REVERE RD	REVERE RD	475	21	1,108.33
35	EMERALD	CR	100	EUCLID RD	EUCLID RD	1,697	23	4,336.78
35	CLERMONT	RD	1400	PELHAM RD	NEWHALL RD	565	28	1,757.78
35	CLERMONT	RD	1500	REVERE RD	EUCLID RD	1,163	28	3,618.22
35	CLERMONT	RD	1422	NEWHALL RD	REVERE RD	883	28	2,747.11
35	EUCLID	RD	1500	REVERE RD	BURBANK CR	317	28	986.22
35	EUCLID	RD	1850	EMERALD CR	CLERMONT RD	308	23	787.11
35	EUCLID	RD	1700	BRENTWOOD RD	CUSTER CR	141	26	407.33
35	EUCLID	RD	1530	PUTNAM LN	BLANCHARD RD	406	26	1,172.89
36	LATTIMORE	LN	100	BRENTWOOD RD	CIRCLE	798	23	2,039.33
36	SINNOTT	CR	2	BRENTWOOD RD	BRENTWOOD RD	995	23	2,542.78

Priority Code	Street	TP	BLK	FROM	TO	LEN	WI	SY
36	TRAVIS	CR	4	REVERE RD	REVERE RD	499	21	1,164.33
36	BRENTWOOD	RD	4914	SPEARS LN	REVERE RD	459	26	1,326.00
36	BRENTWOOD	RD	4700	EUCLID RD	LATTIMORE LN	348	26	1,005.33
36	BRENTWOOD	RD	4812	SINNOTT CR	SINNOTT CR	264	26	762.67
36	BRENTWOOD	RD	4908	SINNOTT CR	SPEARS LN	579	26	1,672.67
37	WATAUGA	CT	2	MCCORMICK RD	CUL DE SAC	162	28	504.00
37	TIPPERARY	CT	6	MCCORMICK RD	CUL DE SAC	543	22	1,327.33
37	KILKENNY	CT	8	MCCORMICK RD	CUL DE SAC	283	28	880.44
37	TIMMONS	DR	5000	MCCORMICK RD	MCCORMICK RD	1,064	28	3,310.22
37	DONNYBROOK	CT	6	MCCORMICK RD	CUL DE SAC	343	22	838.44
38	MONTEREY	LN	102	CUL DE SAC	PELHAM RD	652	23	1,666.22
39	NEWHALL	RD	5700	SEDWICK RD	SHAMROCK RD	264	28	821.33
39	NEWHALL	RD	5800	SHAMROCK RD	ELMSET LN	868	28	2,700.44
40	GATESWAY	CT	2	COTTONWOOD DR	CUL DE SAC	102	22	249.33
41	BEECHAM	WY	1400	DOWNING CREEK P	TANYARD PL	294	22	718.67
41	BENWICK	CT	2	BEARKLING PL	CUL DE SAC	197	22	481.56
41	TANYARD	PL	2	BEECHAM WY	CUL DE SAC	246	22	601.33
41	DUNMORE	PL	1784	BELFAIR WY	CUL DE SAC	140	22	342.22
41	BEECHAM	WY	1484	TANYARD PL	CUL DE SAC	153	22	374.00
41	HUNTINGRIDGE	RD	6300	TOTTENHAM LN	FALCONBRIDGE RD	289	30	963.33
41	HUNTINGRIDGE	RD	6200	BROOKHOLLOW LN	TOTTENHAM LN	688	30	2,293.33
41	DUNMORE	PL	1778	KILLINGTON CT	BELFAIR WY	270	22	660.00
41	DUNMORE	PL	1774	DOWNING CREEK P	KILLINGTON CT	199	22	486.44
41	HUNTINGRIDGE	RD	6800	RIDGEFIELD DR	KNOTTY PINE DR	609	30	2,030.00

96306 282,389.44

18.24

TOTAL

Miles

SY

PROPOSAL FOR FURNISHING  
ALL LABOR, EQUIPMENT, TOOLS, ETC.  
FOR COMPLETE CONSTRUCTION  
OF  
STREET REPAIRS AND RESURFACING  
ST-226  
DURHAM, NORTH CAROLINA

To The City of Durham, North Carolina  
c/o The City Manager  
City Hall  
Durham, North Carolina

The undersigned Bidder hereby declares that the names of all persons interested in this Proposal as principals appear in the blank spaces hereinafter provided for such purpose, that this Proposal is in all respects fair and without collusion, that the Bidder has examined the locations of the proposed work, the advertisement, the instruction to Bidders, the specifications, SDBE requirements of the Minority and Women Business Enterprise Plan of the City of Durham, the Contract documents and Bond forms, and the plans and drawings therein referred to and fully understands the same and agrees and accepts the terms and conditions thereof, that it is understood that the estimated quantities are approximate only and are given for the purpose of comparing bids upon a uniform basis, and that said estimate shall in no way effect the unit prices for the Work.

The undersigned Bidder hereby agrees to furnish at the Bidder's cost the expense of all the necessary labor, tools, apparatus, machinery, equipment, transportation and all other things which may be required to fully and properly perform all the terms, covenants, provisions and agreements of the annexed Contract.

The undersigned hereby agrees to do said work and furnish said materials as prescribed in the Contract and Specifications, and, according to the plans and requirements of the Engineer under said Contract and Specifications, in a first-class manner and to the best of the undersigned's ability at the following unit prices.



Proposal for Contract ST-226  
Street Repairs and Resurfacing

Submitted By: \_\_\_\_\_

Note: The unit price bid for items in this contract are for furnishing and installing all items of work as indicated in the plans and specifications, complete, in place and accepted as per approved plans, the City of Durham Standards and Specifications and N.C. Department of Transportation Standards and Specifications

Item No.	Description	Total Quantity	Unit	Unit Cost	Total Cost
1	MOBILIZATION, PROGRESS SCHEDULE and DEMOBILIZATION (10% Maximum)	1	EA.	\$	\$
2	MILLING ASPHALT PAVEMENT – (FOR 0” TO 4-1/2” DEPTH)				
	a. Depth of 0” to 1-1/2”	18,000	S.Y.	\$	\$
	b. Depth of 1-1/2” to 3”	12,000	S.Y.	\$	\$
	C Depth of 3” to 4-1/2”	5,000	S.Y.	\$	\$
3	MANHOLE ADJUSTMENTS	275	EA.	\$	\$
4	VALVE AND METER BOX ADJUSTMENTS	70	EA.	\$	\$
5	PATCHING / LEVELING / WEDGING EXISTING PAVEMENT (PRIOR TO OVERLAY OPERATIONS)	145	TONS	\$	\$
6	CONCRETE (CURB, WALK OR DRIVEWAY, ETC. –REPAIR, REPLACE), FURN & INSTALL	250	S.Y.	\$	\$
7	PAVEMENT STRUCTURE REMOVAL and STABILIZATION – VARIABLE DEPTH TO 10” Below Existing Pavement (Includes cutting pavement, excavation, removal and disposal of unsatisfactory material, and subgrade stabilization to provide suitable support for new pavement structure)	7400	S.Y.	\$	\$
8	PAVEMENT STRUCTURE REMOVAL and STABILIZATION – FULL DEPTH TO 18” Below Existing Pavement (Includes cutting pavement, excavation, removal and disposal of unsatisfactory material, re-use of existing satisfactory material, and restoration or stabilization of subgrade to provide suitable support for new pavement structure)	3175	S.Y.	\$	\$
9	ASPHALT CONCRETE BASE COURSE, TYPE B25.0B	3275	TONS		
10	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B	1100	TONS	\$	\$
11	ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B	14,550	TONS	\$	\$
12	ABC STONE (SHOULDER, ROADWAY & DRIVES, PAVEMENT STRUCTURE REPAIRS, ETC. – REPAIR, REPLACE), FURN. & INSTALL	825	TONS	\$	\$
13	ASPHALT BINDER FOR PLANT MIX, GRADE PG 64-22	985	TONS	\$	\$
14	TRAFFIC CONTROL, SIGNAGE AND MAINTENANCE OF TRAFFIC	1	EA.	\$	\$

**TOTAL AMOUNT FOR CONTRACT ST-226**

**\$** \_\_\_\_\_

**SUMMARY OF PROPOSAL FOR CONTRACT ST-226**

**TOTAL AMOUNT FOR CONTRACT ST-226**

**\$**

We agree to diligently perform the work in accordance with all contract documents, to complete such work within the period as outlined in the contract, and to begin work within ten (10) days after receipt of the Notice to Proceed from the Engineer.

**ACKNOWLEDGEMENT OF AMENDMENTS**

(The offeror acknowledges receipt of amendments to the proposal – note amendment number and date)

AMENDMENT NUMBER				
DATE				

The undersigned Prime Contractor has regularly engaged in Contract work of this class for \_\_\_\_\_ Years, and has executed the following water and/or sewer work as principals:

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List of Prime Contractor's personnel experienced to do this work including and designating the foreperson or forepersons, or superintendent to be in charge of this work showing the length of their varied experience with this particular work. The list shall not include subcontractor personnel.

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List of Prime Contractor's equipment in good condition and suitable for the completion of this Contract. Prime Contractor must be able to demonstrate they own all equipment necessary to complete all portions of the Contract. The list shall not include subcontractor equipment.

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PLEASE ADD ADDITIONAL SHEETS IF NECESSARY TO EXPLAIN THE ABOVE ITEMS

**Proposal for Contract ST-226**  
**Street Repairs and Resurfacing**

**Submitted By:** \_\_\_\_\_

Respectfully submitted,

By: \_\_\_\_\_  
Signature of Person, Firm or  
Corporation

\_\_\_\_\_  
President

\_\_\_\_\_

\_\_\_\_\_  
Address

\_\_\_\_\_  
Phone Number

\_\_\_\_\_  
Contact Person

Attest:

\_\_\_\_\_  
Secretary

State of North Carolina General Contractor's License No. \_\_\_\_\_

## NON-COLLUSION AFFIDAVIT OF PRIME BIDDER

State of \_\_\_\_\_ County of \_\_\_\_\_  
\_\_\_\_\_, being first duly sworn, deposes and says that:

1. He is \_\_\_\_\_ of \_\_\_\_\_, the bidder that has submitted the attached bid;

2. He is fully informed respecting the preparation and contents of the attached bid and of all pertinent circumstances respecting such bid;

3. Such bid is genuine and is not a collusive or sham bid;

4. Neither the said bidder nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly with any other bidder, firm or person to submit a collusive or sham bid in connection with the contract for which the attached bid has been submitted or to refrain from bidding in connection with such contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other bidder, firm or person to fix the price or prices in the attached bid or of any other bidder, or to fix any overhead, profit or cost element of the bid price or the bid price of any other bidder, or to secure through any collusion, conspiracy connivance or unlawful agreement any advantage against the \_\_\_\_\_ (Local Public Agency) or any person interested in the proposed contract; and

5. The price or prices quoted in the attached bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the bidder or any of its agents, representatives, owners, employees, or parties in interest, including this affiant.

(Signed)

\_\_\_\_\_

\_\_\_\_\_  
Title

Subscribed and sworn to before me this

\_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_

\_\_\_\_\_  
Title

My Commission Expires \_\_\_\_\_

## NON-COLLUSION AFFIDAVIT OF SUBCONTRACTOR

State of \_\_\_\_\_ County of \_\_\_\_\_  
\_\_\_\_\_, being first duly sworn, deposes and says that:

1. He is \_\_\_\_\_ of \_\_\_\_\_, hereinafter referred to as the "Subcontractor";
2. He is fully informed respecting the preparation and contents of the subcontractor's Proposal submitted by the subcontractor to \_\_\_\_\_, the Contractor for certain work in connection with the \_\_\_\_\_ Contract pertaining to the Project in \_\_\_\_\_ (City or County and State);
3. Such subcontractor's Proposal is genuine and is not a collusive or sham proposal;
4. Neither the subcontractor nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly with any other bidder, firm or person to submit a collusive or sham Proposal in connection with such contract or to refrain from submitting a Proposal in connection with such contract, or has in any manner, directly or indirectly, sought by unlawful agreement or connivance with any other bidder, firm or person to fix the price or prices in said contractor's Proposal, or to fix any overhead, profit or cost element of the price or prices in said contractor's Proposal, or to secure through collusion, conspiracy connivance or unlawful agreement any advantage against the \_\_\_\_\_ (Local Public Agency) or any person interested in the proposed contract; and
5. The price or prices quoted in the subcontractor's Proposal are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the bidder or any of its agents, representatives, owners, employees, or parties in interest, including this affiant.

(Signed)

\_\_\_\_\_

\_\_\_\_\_

Title

Subscribed and sworn to before me this

\_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_

\_\_\_\_\_

Title

My Commission Expires \_\_\_\_\_

**BID BOND for the City of Durham**

**Contract name and number or other description of the Contract:**

**Name of Bidder:**

**Name, address, and telephone number of Surety's N. C. Resident Agent:**

**Telephone number of Surety's home office:**

**Surety is a corporation organized and existing pursuant to the laws of the State of:**

**Amount of this bond:** *check one:*

*(write or type the amount in words and figures)* All numbers in this section are in U. S. dollars.

(\$                      )

five percent of the amount of the proposal

**Date of execution of this bond:**

Oblige: CITY OF DURHAM, a North Carolina municipal corporation.

● \* \* \* \* \*

KNOW ALL PERSONS BY THESE PRESENTS, that the Surety executing this bond, which Surety is duly licensed to act as surety in North Carolina, is held and firmly bound unto the City of Durham, Oblige, in the penal sum of the amount stated above, for the payment of which sum, well and truly to be made, the Surety binds itself and its successors and assigns, jointly and severally, by these presents. Whereas the Bidder is herewith submitting a proposal for the Contract referred to above, and the Bidder desires to file this Bid Bond in lieu of making the cash deposit pursuant to G.S. 143-129; NOW THEREFORE, THE CONDITION OF THE ABOVE OBLIGATION is such, that if the Bidder shall be awarded the contract for which the bond is submitted, and shall, within ten days after the award is made, execute and deliver to the Oblige the contract and give satisfactory surety as required by G.S. 143-129, then this obligation shall be null and void, otherwise to remain in full force and virtue; and if the Bidder fails or refuses to so execute and deliver said contract or give said satisfactory surety, the Surety shall upon demand forthwith pay to the Oblige the full penal sum of this bond. The Surety waives all extensions of time, and notice of extensions of time, for the opening of proposals and for the modification, award, execution, and delivery of the contract. IN WITNESS WHEREOF, the Surety has executed this instrument under its seal as of the date of execution indicated above, pursuant to authority of its governing body.

\_\_\_\_\_  
(name of Surety)

\_\_\_\_\_  
(signature of Surety's attorney in fact)  
(Affix Surety's corporate seal.)

(Instructions to Surety: If you use a raised corporate seal, press hard enough to make it legible)  
Bid Bond Page 1 RNW:071301

ACKNOWLEDGMENT OF SURETY'S EXECUTION OF BID BOND

State of \_\_\_\_\_ County of \_\_\_\_\_

I, \_\_\_\_\_, a notary public in and for said county and state, certify that \_\_\_\_\_ personally appeared before me this day and acknowledged that he or she is Attorney in Fact for \_\_\_\_\_, the Surety named in the foregoing Bid Bond, in which bond the Oblige is the City of Durham, and that he or she executed said bond, under the seal of the Surety, on behalf of the Surety.

This the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

My commission expires: \_\_\_\_\_  
\_\_\_\_\_  
Notary Public

PRIME CONTRACTOR PRIVILEGE LICENSE (TO BE ATTACHED)



**SMALL DISADVANTAGED BUSINESS ENTERPRISE**

**REQUIREMENTS**

**CITY OF DURHAM, NC**

**PROJECT GOAL SHEET FOR  
STREET REPAIRS AND RESURFACING**

**CONTRACT ST-226**

	<u>MSDBE</u>	<u>WSDBE</u>
GENERAL CONSTRUCTION	<u>7%</u>	<u>3%</u>

Per Section 26-8. (a) of the Ordinance to Promote Equal Business Opportunities in  
**City Contracting:** “SDBE’s that are owned by SED persons who are not Blacks or women may be counted by the Bidder  
towards either SDBE goal.”

MSDBE – Small Disadvantaged Business Enterprise owned by Blacks  
WSDBE – Small Disadvantaged Business Enterprise owned by women  
SDBE – Small Disadvantaged Business Enterprise  
SED – Socially Economic Disadvantaged



**CITY OF DURHAM**

**SMALL DISADVANTAGED BUSINESS**

**ENTERPRISE**

**CONSTRUCTION FORMS**

**Equal Opportunity/ Equity Assurance Department**



**Mailing Address:**  
101 City Hall Plaza  
Durham, North Carolina 27701

**Street Address:**  
211 Rigsbee Avenue  
Durham, North Carolina 27701

**Phone:** (919) 560-4180  
**Facsimile:** (919) 560-4513

**INSTRUCTIONS ON SDBE REQUIREMENTS  
FOR USE IN BIDDING ON CONSTRUCTION PROJECTS WITH THE CITY OF DURHAM**

These instructions summarize the provisions of the City of Durham's Equal Business Opportunity Ordinance as it applies to the bid process. Of course, as with any summary, it cannot reflect all of the ordinance.

**QUESTIONS AND ANSWERS ON SDBE REQUIREMENTS**

**1. What is the purpose of the City's Equal Business Opportunity (EBO) program?** The Director of the City's EO/EA Department has set SDBE goals for this contract. There will be a goal for SDBEs owned by Blacks and a goal for SDBEs owned by women. For the bid to be fully considered by the City, the bid needs to meet those goals or the bidder needs to have made good-faith efforts to subcontract with SDBEs in order to meet the goals. In order to be given credit for making those good-faith efforts, however, the bidder must provide written documentation of those good-faith efforts. That written documentation must be submitted to the City within 2 days after the bid opening unless a different time is stated by the City. See the instructions below regarding Form E-107.

**2. What is an "SDBE"?** It means a Small Disadvantaged Business Enterprise. An SDBE is a business, certified by the City of Durham as an SDBE, whose management, policies, major decisions, and daily business operations are independently managed and controlled by one or more socially and economically disadvantaged individuals. Among those considered to be "socially and economically disadvantaged" are individuals found by the City on a case-by-case basis to have been subjected to racial or ethnic prejudice or cultural bias within American society because of his or her identity as a member of a group. The business must not exceed size and gross revenue limits, and it must be majority-owned by one or more socially and economically disadvantaged individuals.

The firm needs to have its certification from the City before the bid opening if it is to count toward meeting the goals. See the next answer on how certification is needed in the good-faith efforts context. Many other units of government, such as counties, departments of transportation, and states, also certify firms and maintain lists of certified firms, but for purposes of complying with the City of Durham's SDBE requirements, the SDBE must be certified by the City of Durham. Certification does not mean that the City has found the firm to be competent.

**3. What SDBE forms must a bidder or contractor turn in to the City, and when?**

<b><u>Name or description of form</u></b>	<i>Necessary to submit this form?</i>	<i>When to submit it?</i>
E-101 (SDBE PARTICIPATION ON BASE BID)	Always	With the bid
E-102 (SDBE PARTICIPATION ON BID ALTERNATE)	Yes, if there are alternates. Use a separate form for each alternate.	With the bid
E-103 reserved for future use)	n/a	n/a
E-104 (EMPLOYEE BREAKDOWN)	Has the bidder prequalified? Has the bidder met the SDBE goals? If the answer to either of these question is "yes," then the form is not required. If the answer to both of those questions is "no," then the bidder must submit this form as part of its documentation of good-faith efforts.	Within 2 days after bid opening unless a different time is stated by the City

**What SDBE forms must a bidder or contractor turn in to the City, and when? (continued)**

<b><u>Name or description of form</u></b>	<i>Necessary to submit this form?</i>	<i>When to submit it?</i>
E-105 (STATEMENT OF INTENT TO PERFORM AS SUBCONTRACTOR)	Yes, if the bidder proposes to count any subcontracts with SDBEs towards the SDBE goals	Within 5 days after bid opening unless a different time is stated by the City
E-106 (REQUEST TO CHANGE SDBE PARTICIPATION AFTER BID OPENING)	Yes, if the bidder or contractor proposes certain changes in its subcontracting	Not with the bid. Once the bidder is identified as the apparent lowest responsible bidder, this form is due before the bidder/contractor can make the proposed change.
E-107 (QUESTIONNAIRE ON BIDDER'S GOOD-FAITH EFFORTS)	No, but it may help the bidder's case if the bidder failed to meet the SDBE goals. Do not turn in if the bidder met the goals.	Within 2 days after bid opening unless a different time is stated by the City
Good-faith documentation	Yes, if the bidder failed to meet the SDBE goals.	Within 2 days after bid opening unless a different time is stated by the City
Equal employment opportunity statement	Always, unless the bidder has prequalified	Within 2 days after bid opening unless a different time is stated by the City

**4. If a bidder fails to meet the SDBE goals, can it still be awarded the contract?** Bidders that do not meet the goals but demonstrate good-faith efforts are treated equally to those that meet the goals. Awarding a contract is ultimately the decision of the City Council, which considers compliance with the EBO ordinance along with other matters.

**5. In making good-faith efforts, what SDBEs should a potential bidder contact?** The City provides a list of SDBEs that have been certified by the City of Durham for particular trades, services, goods, etc. Potential bidders should contact SDBEs listed for the work that can be subcontracted.

**6. Our firm already has employees who can do the work and does not want to subcontract that work. How does this fit in?** The purpose of the EBO ordinance is to change business practices that would otherwise occur, by giving opportunities to under-used segments of the economy. If the bidder does not meet the goals, its good-faith efforts will be examined as with any other bidder that did not meet the goals.

**7. If the bidder contacts a small socially and economically disadvantaged firm that could become a certified SDBE, will that count toward good-faith efforts?** This contact will not count unless the firm that you contact is able to get its certification from the City of Durham before the bids are opened. In making good-faith efforts, let us suppose that a potential bidder contacts firms that could qualify to be SDBEs. If those firms have their certification from the City at the time of the bid opening, those contacts will count towards good-faith efforts. But there is a risk, because getting certification takes time, and the firm has to provide various documents to the City in order to merit certification.

**8. Do all subcontracts with SDBEs count?** The City will count as SDBE participation only expenditures to an SDBE that performs a commercially-useful function in the relevant work. An SDBE performs such a function when the socially and economically disadvantaged owners themselves are actually involved in performing,

managing, and supervising a distinct element of the work. To determine whether those requirements are met, the City takes into account the amount of work subcontracted, industry practices, the adequacy of the resources of the SDBE for the work, the qualifications, such as possession of licenses, permits, and professional designations of the socially and economically disadvantaged owners, and other relevant factors. For example, if an SDBE lacks substantially all of the resources equipment, and personnel to do the work it shall be presumed not to perform a commercially-useful function. The EBO ordinance includes more points to consider on this issue.

**9. May an SDBE enter into subcontracts?** This question arises in two situations: (1) the bidder is an SDBE and (2) the bidder is subcontracting with an SDBE. Consistent with normal industry practices, an SDBE may enter into subcontracts. If an SDBE subcontracts a significantly greater portion of the work of the contract than would be expected on the basis of normal industry practices, the SDBE shall be presumed not to be performing a commercially-useful function. The SDBE may present evidence to rebut this presumption to the City.

**10. What does it mean to say that information must be submitted “with the bid”?** Unless bidders are given other written instructions from the City, it means that the information must be in a sealed envelope, delivered to the same place where a bid can be delivered, and before the time set for the bid opening. Unless bidders are given other written instructions from the City, the information can be either in the same envelope as the bid or in a separate envelope. If it is a separate envelope, the outside of the envelope must state the same information that is required on the bid envelope, and that it contains SDBE forms.

**11. When the chart in question 3 says that a form can be submitted 2 days or 5 days after the bid opening, exactly when is it due? Where is it to be submitted?**

The form must be submitted to the City’s EOE Department, located at 211 Rigsbee Avenue or faxed to (919) 560-4513, so that it is received within 2 days or 5 days (whichever applies according to the chart) after the bid opening. If the form is faxed, it must be received before midnight on that 2<sup>nd</sup> or 5<sup>th</sup> day. If it is delivered by any other means, it must be received before 5:00 PM. In counting these 2 days or 5 days, exclude the following: the day of the bid opening, Saturday, Sunday, and holidays observed by city government of the City of Durham. For instance, for a form due in 2 days, if the bid opening is on a Thursday, the due date for the form would be on the following Monday (midnight if faxed, otherwise 5:00 PM). If the day after the bid opening or that Monday is a City holiday, the form would be due on Tuesday. For a form due in 5 days, if the bid opening were on Tuesday, the due date for the form would be on the following Tuesday (midnight if faxed, otherwise 5:00 PM). If any weekday between those Tuesdays is a City holiday or if the Tuesday on which the form would be due is a City holiday, the form would be due on Wednesday, January 13. It is best to place the documents inside an envelope, and to write on the outside of the envelope the same information that is required on the bid envelope, and that it contains SDBE forms.

Holidays observed by city government are New Years’ Day, Dr. Martin Luther King, Jr., Day; Good Friday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the day after Thanksgiving Day, Christmas Day; two days (varying from year to year) during the week of Christmas Day; and other times as may be authorized by City Council.

*(questions and answers continue on the next page.)*

**12. When there are bid alternates, how is SDBE participation counted?** The total amount of the award actually made by the City is the key. For instance, assume the following made-up example:

- ◆ Base bid is \$200,000
- ◆ Alternate A bid is \$50,000
- ◆ Alternate B bid is \$20,000
- ◆ Black-owned SDBE goal is 10%.
- ◆ The bidder proposes Black-owned SDBE participation as follows: \$20,000 on the base bid, \$4,000 on Alternate A, and \$10,000 on Alternate B.

In this fictional example, the bidder may or may not meet the goal, depending on the actual award by Council. This chart illustrates:

AWARD BY CITY COUNCIL				
	Only the base bid	Base bid + Alternate A	Base bid + Alternate B	Base bid + Alternates A & B
<b>Bid total</b>	\$200,000	\$250,000 (200,000 + 50,000)	\$220,000 (200,000 + 20,000)	\$270,000 (200,000 + 70,000)
<b>Total SDBE particip ation</b>	\$20,000	\$24,000 (20,000 + 4,000)	\$30,000 (20,000 + 10,000)	\$34,000 (20,000 + 14,000)
<b>Black- owned SDBE percent age</b>	10%	9.6%	13.6%	12.6%
<b>Meet 10% Black- owned SDBE goal?</b>	Yes	No	Yes	Yes

**14. How does the City count participation by an SDBE that is not owned by Blacks or women?** An SDBE not owned by Blacks or women may be counted by the bidder towards either goal. The bidder should specify how to count such SDBEs on form E-101.

**15. How is the lease of equipment by an SDBE counted?** If the SDBE leases equipment for the work of the contract, the value of the lease payments is included as part of the SDBE's participation. However, it is not proper to include such lease payments if they are to be made to the prime contractor or the prime contractor's "Affiliate." To understand what an "Affiliate" is, see section 26-3 of the EBO ordinance.

**16. How is the purchase of goods from an SDBE counted?** If the bidder is buying goods from an SDBE, the cost of the goods can be considered SDBE participation only if (a) the SDBE operates or maintains a factory that produces the goods, or (b) the SDBE has an establishment where the goods of the general character described by the specifications or required under the Contract are regularly sold or leased to the public in the usual course of business. If (b) applies, the SDBE's *principal* business must be selling or leasing those goods and the SDBE must operate under its own name.

## INSTRUCTIONS FOR INDIVIDUAL SDBE BID FORMS FOR CONSTRUCTION

**Form E-101 (SDBE PARTICIPATION)** On this form, “participation” is the dollar amount of subcontracts for significant goods and services to be used to perform the contract. For instance, if the bidder would enter into subcontract with SDBE’s for a total of \$30,000, that would be the SDBE participation amount. The sum of SDBE participation and non-SDBE participation should equal the amount of the bid. Form E-101 is required for the base bid

**Form E-102 (SDBE PARTICIPATION ON BID ALTERNATE)** This form is essentially the same as Form E-101, except that it is used for the alternate bids instead of the base bid. Use a separate Form E-102 for each alternate bid.

**Form E-103** reserved for future use

**Form E-104 (EMPLOYEE BREAKDOWN)** Complete Part A for the primary location where the goods and services that are the subject of the bid are to be made or provided. If the parent company or other locations of the bidder are providing any substantial portion of the goods or services, then the bidder must also complete Part B, for the consolidated company. If the bidder has an EEO-1 Report that provides the same information as required on the Form E-104, the EEO-1 Report may be used instead. On whether to submit Form E-104, see question 3 above. If you need to submit it, see questions 3 and 11 above on when and where to turn in this form.

**Form E-105 (STATEMENT OF INTENT TO PERFORM AS SUBCONTRACTOR)** The bidder must provide a Form E-105 (Statement of Intent) for each SDBE firm that the bidder would subcontract with if the City awards the contract to the bidder. See questions 3 and 11 above on when and where to turn in this form.

**On Form E-105, what happens if column 2 (dollar amount) disagrees with column 3 (percentage)?** If there is a conflict between the dollar amount in Column 2 and the percentage of base bid in Column 3, the percentage stated in Column 3 will control. For instance, if Column 2 is \$10,000, Column 3 is 10%, and the base bid is \$200,000, there is an error, because ten percent of \$200,000 is \$20,000, not \$10,000. In that example, the form will be read as a commitment for \$20,000. If the SDBE both (i) is doubtful of its arithmetic *and* (ii) wants Column 2 to control in case of disagreement, it may say that Column 2 will control over Column 3, but to do so, it must write that on Form E-105.

**E-106 (REQUEST TO CHANGE SDBE PARTICIPATION AFTER BID OPENING)** **When is this form used?** Beginning with the time that the City Manager identifies a bidder as the apparent lowest responsible bidder and continuing as that bidder is awarded the contract and continuing until that bidder/contractor reaches the point of final completion of the work, Form E-106 is to be used when the following occurs: If the bidder/contractor proposes to do any of the following –

- to replace a subcontractor,
- to perform subcontracted work with the bidder/contractor’s own forces,
- to increase the quantity of subcontracted work,
- to decrease the quantity of subcontracted work, or
- to change the allocation of work among subcontractors,

then the bidder/contractor must make good-faith efforts to attain the goals that it has shown on the E-101 and applicable E-102 forms, and the bidder/contractor must fill out Form E-106. Substitutions of subcontractors in these circumstances, both before and after the awarding of a contract, are subject to City approval. Consult the City’s EO/EA Department on the procedures to follow in order to comply with City Code 26-10(c).



**E-107 (QUESTIONNAIRE ON BIDDER’S GOOD-FAITH EFFORTS)** Bidders that do not attain the SDBE goals have the responsibility to make good-faith efforts and to demonstrate to the City that they have made such efforts. In determining a bidder’s good-faith efforts to engage SDBEs, the City Manager shall consider the information supplied by the bidder to answer the questions in Form E-107, , along with other criteria that the City Manager deems proper. Form E-107 is an optional tool that bidders may use to show that they have made good-faith efforts. See questions 3 and 11 above on when and where to turn in this form. Even when this form may be submitted after the bid opening, it cannot include information on efforts made after the bid opening. Even if a bidder does not use Form E-107, the City will nevertheless attempt to answer the questions on the E-107 using good-faith documentation supplied by the bidder. Bidders who do not turn in Form E-107 will still find it helpful to know how the City will determine whether good-faith efforts have been made.

**For Section 2 of Form E-107 --** To make the best good-faith efforts as described under Section 2 on E-107, your firm should have sent a written letter or fax to all SDBEs on the City’s list that perform the kind of work to be subcontracted. Your firm needs to keep a record of all of these attempts to reach SDBEs. That letter would say, in effect, as follows: (Of course, your firm would need to write appropriate words where *italicized instructions* are used below.)

Our firm is interested in bidding on a contract with the City of Durham for [*describe the project*]. We are interested in subcontracting, to your firm, the following work [*describe specific work, for example, painting of interiors of 5 rooms, including prep work; or supplying 20 circuit breakers of type XJE-R or equivalent*]. You may inspect the applicable plans and specifications and descriptions of items to be purchased at our office located at the address shown above, or at the City of Durham’s EO/EA Department, 211 Rigsbee Avenue, Durham, N.C., 919-560-4180[, or at the AGC plan room in (*specify the locations*)]. You may obtain a copy [*explain how and from whom (the City, architect, engineer, etc.) the potential subs can obtain a copy*].

If applicable, tell the SDBEs at which offices of the AGC the plans and specifications may be seen, possibly from the following AGC list.

1100 Euclid Avenue Charlotte, NC 28203-1868 Phone: (704)372-1450	Caswell Bldg., Glenwood Place 3700 National Drive, Ste. 201 Raleigh, NC 27612 Phone: (919)781-3270
4000 Piedmont Parkway, Ste. 400 High Point, NC 27265-0941 Phone: (336)812-3127	2527 S. 17th St. Wilmington, NC 28401 (McGee CADD Reprographics Bldg.) Phone: (910)791-5533
2713 Breezewood Avenue Fayetteville, NC 28303 Phone: (910)484-0184	801 Dickenson Blvd. Greenville, NC 27834 (McGee CADD Reprographics Bldg.) Phone: (252)752-4400
404 Executive Park, Bldg. 3 Asheville, NC 28801-2426 Phone: (828)254-6499	Other AGC locations if they have the plans and specifications

**GOOD-FAITH DOCUMENTATION.** This is not a City form but is documentation to be supplied by the bidder. See the instructions on Form E-107 above. Unless the bidder meets the SDBE goals, the bidder must demonstrate that it made good-faith efforts. To do so, it can use a combination of providing answers to Form E-107 and documentation, such as copies of the notices to SDBEs that are described in question 1(c) on Form E-107. See questions 3 and 11 above on when and where to turn in this form. Even when this documentation may be submitted after the bid opening, it cannot include information on efforts made after the bid opening.

**EQUAL EMPLOYMENT OPPORTUNITY (EEO) STATEMENT.** This is not a City form but is a statement to be supplied by the bidder. The bidder shall state its nondiscrimination employment policy and business practices as of the time of bid opening. Write “EEO” at the top of the first page of your statement. This is different from the EEO-1, which is referred to in the instructions for Form E-104. See questions 3 and 11 above on when and where to turn in this form.

**Form E-101 SDBE PARTICIPATION ON BASE BID**

Name of Bidder: \_\_\_\_\_

Prequalification number: \_\_\_\_\_ Prequalification expiration date: \_\_\_\_\_

Total dollar amount of SDBE participation in base bid work: \_\_\_\_\_

*For each row, check one column: E, F, or G.*

Column A	Column B	Column C	Column D	Column E	Column F	Column G
Name of proposed subcontractor for base bid work	Goods and services to be provided for base bid work	Subcontract amount, in dollars, for base bid work	Percentage of total base bid (Column C divided by total base bid)	Black-owned SDBE	Women-owned SDBE	Non-SDBE
		\$	%			
		\$	%			
		\$	%			
		\$	%			

*Attach extra sheets as needed. See question 14 under **QUESTIONS AND ANSWERS ON SDBE REQUIREMENTS**, which states that the bidder may check column E or column F for an SDBE that is neither Black-owned nor women-owned.*

Do the above participation amounts meet the goals on this contract, assuming only the base bid is counted?

☐ **Yes**    ☐ **No.** If the answer is No: (1) the bidder must have made good-faith efforts; (2) the bidder must provide, within 2 business days after bid opening, documentation of good-faith efforts; and (3) the bidder must sign below.

As an authorized representative of the Bidder, I swear or affirm under penalty of fraud that the good-faith efforts documentation submitted with this bid, pertaining to the base bid and all alternates, if any, is correct and not intended to defraud or mislead. After the contract between the City and the Bidder is signed, except to the extent that the City gives prior written approval for changes, the Contractor agrees that it shall engage the subcontractors listed on this E-101 and on all applicable E-102 forms, to perform the work for the dollar amounts or percentages described on this E-101 and applicable E-102s.

\_\_\_\_\_  
**Signature of individual authorized to sign for Bidder**

# Form E-102 SDBE PARTICIPATION ON BID ALTERNATE

This form pertains to the following bid alternate: \_\_\_\_\_

(Specify the alternate, in the way that it is designated in the bid documents)

Name of Bidder: \_\_\_\_\_

Total dollar amount of SDBE participation in work on this alternate: \_\_\_\_\_

*For each row, check one column: E, F, or G.*

Column A	Column B	Column C	Column D	Column E	Column F	Column G
Name of proposed subcontractor for this alternate	Goods and services to be provided for this alternate	Subcontract amount, in dollars, for this alternate	Percentage of total bid for this alternate (Column C divided by total bid for this alternate)	Black-owned SDBE	Women-owned SDBE	Non-SDBE
		\$	%			
		\$	%			
		\$	%			
		\$	%			

Attach extra sheets as needed. . See question 14 under **QUESTIONS AND ANSWERS ON SDBE REQUIREMENTS**, which states that the bidder may check column E or column F for an SDBE that is neither Black-owned nor women-owned.

Do the above participation amounts meet the goals, if you consider only this alternate and not the base bid work? \_\_\_\_ **Yes** \_\_\_\_ **No**. If the answer is No: (1) the bidder must have made good-faith efforts; (2) the bidder must provide, together with this bid, documentation of good-faith efforts; and (3) the bidder must sign Form E-101 (SDBE PARTICIPATION ON BASE BID).

## P-104 EMPLOYEE BREAKDOWN

### Part A – Employee statistics for the **primary location**.

Employment category	Total employees	Total males	Total females	M— a —l— e —s					F— e —m— a —l— e —s				
				White	Black	Hispanic	Asian or Pacific Islander	Indian or Alaskan Native	White	Black	Hispanic	Asian or Pacific Islander	Indian or Alaskan Native
Project manager													
Professional													
Technical													
Clerical													
Labor													
Totals													

### Part B – Employee statistics for the **consolidated company**. *(See instructions for this form on whether this part is required.)*

Employment category	Total employees	Total males	Total females	M— a —l— e —s					F— e —m— a —l— e —s				
				White	Black	Hispanic	Asian or Pacific Islander	Indian or Alaskan Native	White	Black	Hispanic	Asian or Pacific Islander	Indian or Alaskan Native
Project manager													
Professional													
Technical													
Clerical													
Labor													
Totals													

# Form E-105 STATEMENT OF INTENT TO PERFORM AS SUBCONTRACTOR

Name of **Bidder**: \_\_\_\_\_

Name of **Project**: \_\_\_\_\_

The undersigned firm is certified by the City of Durham as an SDBE.

The undersigned SDBE represents that it will enter into a formal contract with the Bidder to perform the following work in connection with the Project, in the dollar amount or percentage listed below, if the Bidder signs a contract with the City of Durham for the Project.

Describe the work in sufficient detail so that it can be determined whether the SDBE's work is a substantial and necessary part of the Project.

<b>Column 1</b> - description of work to be done by undersigned SDBE	<b>Column 2</b> -dollar amount of the proposed subcontract between the bidder and the undersigned SDBE	<b>Column 3</b> - percentage of Bidder's base bid represented by the proposed subcontract between the Bidder and the undersigned SDBE

The undersigned SDBE will be ready to begin work on the subcontract on the following date:

Name of SDBE: \_\_\_\_\_ telephone no. \_\_\_\_\_

Address, including zip code, of SDBE: \_\_\_\_\_ fax no. \_\_\_\_\_

\_\_\_\_\_  
**Signature of authorized representative of SDBE**

Title of the person who signed above: \_\_\_\_\_

What person with the SDBE should the City contact with questions about this form or the proposed subcontract? \_\_\_\_\_

Name of individual: \_\_\_\_\_ telephone no. \_\_\_\_\_

Title of individual: \_\_\_\_\_

Email address: \_\_\_\_\_

By submitting this form to the City of Durham, the Bidder represents that if the Bidder signs the contract with the City of Durham for the Project, the Bidder will enter into the subcontract described above with this SDBE.

## E-106 REQUEST TO CHANGE SDBE PARTICIPATION AFTER BID OPENING

Project: \_\_\_\_\_  
Name of bidder or contractor: \_\_\_\_\_  
Name and title of representative of bidder or contractor: \_\_\_\_\_  
Address (including zip code): \_\_\_\_\_  
Telephone number: \_\_\_\_\_ Fax number: \_\_\_\_\_  
Email address: \_\_\_\_\_  
Total amount of original contract, before any change orders or amendments: \_\_\_\_\_  
Total amount of the contract, including all approved change orders and amendments to date, but not counting the changes proposed in this form: \_\_\_\_\_  
Dollar amount of changes proposed in this form: \_\_\_\_\_  
The proposed change (*check one*) ☐ **increases** ☐ **decreases** the dollar amount of the bidder's/contractor's contract with the City.  
Does the proposed change decrease the SDBE participation? (*check one*) ☐ **yes** ☐ **no**  
If the answer is **yes**, complete the following:

### **BOX A. For the subcontract proposed to be changed (increased, reduced, or eliminated):**

Name of subcontractor: \_\_\_\_\_  
Goods and services to be provided before this proposed change: \_\_\_\_\_  
Is it proposed to eliminate this subcontract? ☐ yes ☐ no  
If the subcontract is to be increased or reduced, describe the nature of the change (*such as adding \$5,000 in concrete work and deleting \$7,000 in grading*): \_\_\_\_\_  
Dollar amount of this subcontract before this proposed change: \_\_\_\_\_  
Dollar amount of this subcontract after this proposed change: \_\_\_\_\_  
This subcontractor is (*check one*):  
☐ 1. City-certified Black-owned SDBE  
☐ 2. City-certified women-owned SDBE  
☐ 3. City-certified SDBE that is neither Black-owned nor women owned, but to be credited as  
3(a) ☐ Black-owned SDBE 3(b) ☐ women-owned SDBE  
☐ 4. not a City-certified SDBE

### **BOX B. Proposed subcontracts other than the subcontract described in Box A above**

Name of subcontractor for the new work: \_\_\_\_\_  
Goods and services to be provided by this proposed subcontract: \_\_\_\_\_  
Dollar amount proposed of this proposed subcontract: \_\_\_\_\_  
This subcontractor is (*check one*):  
☐ 1. City-certified Black-owned SDBE  
☐ 2. City-certified women-owned SDBE  
☐ 3. City-certified SDBE that is neither Black-owned nor women owned, but to be credited as  
3(a) ☐ Black-owned SDBE 3(b) ☐ women-owned SDBE  
☐ 4. not a City-certified SDBE

*Add additional sheets as necessary.*

*This form is used only if the conditions described in the instructions are present.*

## E-107 QUESTIONNAIRE ON BIDDER'S GOOD-FAITH EFFORTS

Name of Bidder: \_\_\_\_\_

*If you find it helpful, feel free to attach pages to explain your answers. **How many pages is your firm attaching to this questionnaire?** \_\_\_\_\_ (Don't count the 2 pages of this questionnaire.)*

*If a yes or no answer is not appropriate, please explain the facts. All of the answers to these questions relate only to the time before your firm submitted its bid or proposal to the City. In other words, actions that your firm took after it submitted the bid or proposal to the City cannot be mentioned or used in any answers.*

### 1. SOLICITING SDBEs.

(a) Did your firm solicit, through all reasonable and available means, the interest of all SDBEs certified (that is, in the City's database) in the scopes of work of the contract?    ☐ **yes**    ☐ **no**

(b) In such soliciting, did your firm advertise?    ☐ **yes**    ☐ **no**    Are you attaching copies to this questionnaire, indicating the dates and names of newspaper or other publication for each ad if that information is not already on the ads?    ☐ **yes**    ☐ **no**

(c) In such soliciting, did your firm send written (including electronic) notices or letters? Are you attaching one or more sample notices or letters?    ☐ **yes**    ☐ **no**

(d) Did your firm attend the pre-bid conference?    ☐ **yes**    ☐ **no**

(e) Did your firm provide interested SDBEs with timely, adequate information about the plans, specifications, and requirements of the contract?    ☐ **yes**    ☐ **no**

(f) Did your firm follow up with SDBEs that showed interest?    ☐ **yes**    ☐ **no**

(g) With reference to the SDBEs that your firm notified of the type of work to be subcontracted -- Did your firm tell them:

(i) the specific work your firm was considering for subcontracting?    ☐ **yes**    ☐ **no**

(ii) that their interest in the contract is being solicited?    ☐ **yes**    ☐ **no**

(iii) how to obtain and inspect the applicable plans and specifications and descriptions of items to be purchased?    ☐ **yes**    ☐ **no**

### 2. BREAKING DOWN THE WORK.

(a) Did your firm select portions of the work to be performed by SDBEs in order to increase the likelihood that the goals would be reached?    ☐ **yes**    ☐ **no**

(b) If **yes**, please describe the portions selected.    **ANSWER:**

**3. NEGOTIATION.** In your answers to 3, you may omit information regarding SDBEs for which you are providing Form E-105.

(a) What are the names, addresses, and telephone numbers of SDBEs that you contacted? **ANSWER:**

*See next page for remaining questions.*

(b) Describe the information that you provided to the SDBEs regarding the plans and specifications for the work selected for potential subcontracting. **ANSWER:**

(c) Why could your firm not reach agreements with the SDBEs that your firm made contact with? Be specific. **ANSWER:**

**4. ASSISTANCE TO SDBEs ON BONDING, CREDIT, AND INSURANCE.**

(a) Did your firm or the City require any subcontractors to have bonds, lines of credit, or insurance?

☐ **yes** ☐ **no** (Note: In most projects, the City has no such requirement for *subcontractors*.)

(b) If the answer to (a) is **yes**, did your firm make efforts to assist SDBEs to obtain bonds, lines of credit, or insurance? ☐ **yes** ☐ **no** If **yes**, describe your firm's efforts. **ANSWER:**

(c) Did your firm provide alternatives to bonding or insurance for potential subcontractors? ☐ **yes** ☐ **no** If **yes**, describe. **ANSWER:**

**5. GOODS AND SERVICES.** What efforts did your firm make to help interested SDBEs to obtain goods or services relevant to the proposed subcontracting work? **ANSWER:**

**6. USING OTHER SERVICES.**

(a) Did your firm use the services of the City to help solicit SDBEs for the work? ☐ **yes** ☐ **no** Please explain. **ANSWER:**

(b) Did your firm use the services of available minority/women community organizations, minority and women contractors' groups, government-sponsored minority/women business assistance agencies, and other appropriate organizations to help solicit SDBEs for the work? ☐ **yes** ☐ **no** Please explain. **ANSWER:**



## **GENERAL CONDITIONS**

1. **SCOPE.** For this construction contract, the Contractor shall furnish all licensing, equipment, materials, labor and supervision, as may be necessary to provide for the complete pavement repairs and resurfacing operations at various City street locations throughout the City of Durham.
2. **SUBMITTALS, SPECIFICATIONS AND DRAWINGS.** The priority of work, types of materials, and the methods of construction may be altered at the discretion of the Engineer. All materials specified in this Contract may be replaced by an approved alternate of equal quality in times of shortage and delayed deliveries. Any substitution must be approved by the Engineer. However, only in cases of extreme shortage and/or prolonged delay in delivery, will substitutes be considered.

**Shop drawings for all materials to be included in the Work shall be submitted to the Engineer for review and approval prior to starting work. Any materials which are installed on the project which have not been approved by the Engineer are subject to be removed, disposed of, and replaced by the Contractor at the Contractor's expense.**

All materials and equipment incorporated into the work must be approved and acceptable for their intended use. Submittals for materials and equipment and other contract required items are to be made as outlined under this section of the specifications and as noted elsewhere in the contract. The Department may request submittals be provided for items in addition to those outlined herein when it is deemed necessary to describe the work in the specifications. Each submittal shall be complete and in such detail to allow a determination of compliance with the contract. Submittals covering component items or which form an interrelated system shall be coordinated and submitted concurrently.

- a) **Submittal Definitions** – The types of submittal items required to be provided are identified as, but are not limited to, the following:

Data	Drawings	Instructions
Schedules	Statements	Reports
Certificates	Samples	Records
Owner Manuals	Warranty Data	Operation and Maintenance Manuals

- b) **Submittal Register Schedule** – Submittals shall be coordinated to allow for sufficient time to review and approve, fabricate, deliver and install the items and to coincide with the approved progress schedule. The contractor shall review the specifications and prepare a project specific schedule of submittal items. Adequate time shall be allowed in the schedule for review and approval of all submittal items. A minimum of 30 days shall be included in the schedule for Department approved items.

Specific submittal requirements shall be reviewed during the pre-construction conference, or in a separate submittal conference, conducted with the Department related to preparation and management of the contractor's submittal schedule. This conference shall be conducted after contract award but prior to Notice to Proceed. The contractor is to submit the completed submittal register to the Department within ten (10) days after the Notice to Proceed. When approved, this document will be used to manage and control the flow of submittals for the life of the contract. ATTACHMENT A in APPENDIX E is a sample submittal register that the contractor is to update and use to manage the submittal items. Additional contract specification sections and submittal items are to be added during construction if a requirement for materials or equipments should be noted. Instructions on the use of this register and transmittal form are included as ATTACHMENT B and C.

c) Submittal Classification – All submittals are classified as Department or Contractor approved.

1. Department Approved – Department approval is required for extensions of design, critical materials, deviations, substitutions, equipment whose compatibility with the entire system must be checked, and other items as designated by the Department.
2. Contractor Approved – ***Prior to submittal of any item, all submittal items are to be reviewed and approved by the contractor. Each item is to be reviewed for contract compliance, certified by the contractor's submittal manger and stamped with the following.*** Any item not specifically designated on the submittal register as being Department approved is to be approved by the contractor and provided to the Department as a “for information only” submittal. The contractor is responsible for ensuring that all submittal items meet the contract requirements. Items which do not bear evidence of contractor review will be returned without comment:

<p>Contractor: _____</p> <p>Project: _____</p> <p>_____ Approved – No exceptions noted</p> <p>_____ Approved with corrections as noted on the submittal data or attachments (Re-submittal not required)</p> <p>Signed: _____ Contractor Submittal Manager</p> <p>Date: _____</p>
--

- d) Submittal Manager – The contractor shall designate in writing a competent and qualified individual on his staff to review and approve the submittals for both themselves and for all subcontractors. Satisfactory evidence of these qualifications in the form of a resume shall be provided to the Department for review. The submittal manager shall check to ensure that all items meet contract requirements prior to submittal. Each item shall be reviewed, stamped and certified as noted above. The right is reserved to require the contractor to replace this individual should their performance not be satisfactory during the construction.
- e) Submittal Deviations - Any deviations requested by the contractor shall be noted in writing on the submittal form and shall include the reason(s) for requesting the deviation. No submittal for the purpose of material or equipment substitution or deviation will be considered unless accompanied by an explanation of why such a request is necessary.
- f) Submittal Procedures – After review and approval by the contractor, submittals shall be provided to the Department in a minimum of six (6) copies unless otherwise designated by the Department. The transmittal form that is to be completed and used in forwarded the submittal items to the Department is included as ATTACHMENT C in Appendix E. All submittals are to be forwarded to the following location. After review, the Department will return two (2) copies of the reviewed submittal items to the contractor:

Contract Administration  
City of Durham, Public Works Engineering  
101 City Hall, 3<sup>rd</sup> Floor  
Durham, NC 27701

- g) Withholding of Payment - Failure to provide this information will result in progress payments being withheld or suitable monies being retained to protect the Department's interest until such time as the schedule is provided as required by the specifications. Payment for materials incorporated in the work will not be made until required submittal approvals or identification of Department approved materials and products have been provided.
- h) Work Stoppage and Delays - Work on a specific item will not be allowed to proceed without approved submittals for that item except at the risk of the contractor. Any work performed prior to gaining approval of the submittal items will be performed at the contractor's risk. If items are installed that are not approved, and do not subsequently gain approval, the contractor will promptly remove and replace them with approved materials at no additional cost to the Department. In addition, failure of the contractor to provide adequate review and approval time in his schedule for submittals will not constitute a delay caused by the Department.
- i) Certificates of Compliance - Any certificates of compliance, manufacturer's certifications or certified test reports provided to verify compliance with contract requirements shall contain the following information:

Supplier / Manufacturer / Laboratory Letterhead, including address  
City of Durham Project Identification Number and Location  
Name and address of construction contractor  
Date of Certification  
Material or product description  
Specification standard to which material or product is being certified as meeting  
Specific material or product test results for mill reports or test reports  
Title and signature of official authorized to certify on behalf of the firm

- j) Measurement and Payment - There is no separate payment provided for the development, implementation and management of the submittal requirements as outlined in this specification section. The costs for the work as outlined in this section is included in the price bid for items as noted on the bidding schedule.
3. RESIDENTIAL PROPERTY. Contractors shall note that a portion of the construction will occur in residential areas. Special care may be required restoring property after construction is completed in these areas. Special care shall include, but not be limited to, landscaping, hand raking and grading where specified by the Engineer or Inspector. All costs for this property restoration shall be reflected in the bid prices.
4. EXISTING UTILITIES. If applicable to this contract, the City of Durham has located and shown on the plans to the best of its abilities existing utilities and obstructions, such as gas lines, telephone cables, culverts, etc. However, the Contractor's attention is called to the General Specifications of City of Durham Water & Sewer Construction Specifications, which states that the Contractor shall, at their own expense, locate all existing utilities and other structures ahead of construction. Accordingly, the contractor is to locate any utilities that may be encountered during the pavement repairs performed under this contract. The contractor shall make every effort to avoid damage or disruption of services during the work to be performed.
5. EROSION CONTROL LAW. The Contractor's attention is called to the new specification covering control of erosion, siltation, and pollution which is now required by State law. (See General Specifications, Water & Sewer Construction Specifications, and details.)
6. EROSION CONTROL. The Contractor shall do all that is possible to minimize soil erosion and siltation caused by their operations. The Contractor shall comply with all applicable regulations relating to pollution prevention and control. The Contractor shall keep themselves fully informed of all regulations which affect the conduct of the Work, and shall comply with such regulations at all times.

Specific requirements for each site, such as straw bales, silt fences, and sedimentation pits will be determined by conditions existing at the time of construction. All costs for installing, maintaining and removing specific erosion and siltation control methods will be born by the

Contractor and reflected in the bid prices.

7. EROSION CONTROL MATTING. Erosion control matting shall be used in **all residential areas** and other areas as determined by the Inspector to minimize soil erosion and siltation. The Contractor is responsible for proper installation of the erosion control matting to minimize erosion and to establish an acceptable growth of grass in a timely manner.
8. DUST CONTROL. When in the opinion of the Engineer, dust caused by the construction of water or sewer mains becomes hazardous to adjacent properties, the Contractor will be required to flush the streets (water furnished by the City) or to apply calcium chloride in order to prevent excess dust. There will be no additional payment for this service.
9. TREE ORDINANCE. The Contractor's attention is called to the fact that the City has adopted a tree ordinance (Chapter 21 of the City Code). Therefore any trimming of branches, limbs, etc. during construction will be performed under the guidelines set by the ordinance. For further information contact the Urban Forester in the City's Department of Public Works. (Major points are covered in the General Specifications section of Water & Sewer Construction Specifications.)
10. DISPOSAL OF MATERIAL AT CITY LANDFILL. The City landfill charges for the disposal of material on a per weight basis. The Contractor will not be reimbursed for charges at the landfill. Concrete and other similar materials can only be disposed of at the Rubble Landfill. Banned recyclables will double the tip fee.
11. CLEAN-UP. Upon completion of all construction operations along a street the construction crew will be required to finish all clean-up activities before moving to a different street and commencing further construction. **Only with the permission of the Inspector or Engineer shall a construction crew move to a new site and commence work.** Permission may be granted if clean-up activities continue along the completed street while part of the crew works at another site. If permission is granted and the clean-up activities stop or fall behind schedule along the completed street the Engineer will stop all construction until such time that the clean-up work is finished. The Contractor will not be compensated for any work stoppages should this occur.

TRAFFIC CONTROL. The Contractor will handle the construction work in such a manner as to maintain traffic on the main roads along the construction area, and will provide and maintain such warning signs and barricades as may be necessary to protect the Work and the public in their use of the highway itself, and in no case, will the City of Durham be responsible for any failure of the Contractor to provide such warnings and precautions. All signs and barricades shall meet the minimum requirements of and conform to the standard outline in the manual entitled "Manual on Uniform Traffic Control Devices for Streets and Highways Millennium Edition", as published by the United States Department of Transportation, Federal Highway Administration, 2000. Traffic shall also be maintained in accordance with applicable provisions of the NCDOT Standard Specifications for Roads and Structures and other provisions as may be

outlined in this contract. Representatives of the Department of Transportation and Highway Safety and also of the City of Durham will be called upon to inspect this work from time to time, and their suggestions regarding the safety precautions must be given full consideration. A Work Zone Traffic Control Plan is to be provided for review as referenced elsewhere in this contract. All cost for traffic control, signage and maintenance of traffic are to be included in the existing bid items or in the lump sum cost for this work if a bid item is included in the contract.

***NOTE: Measurement and payment for all work related to traffic control, signage, and maintenance of traffic is to be paid for in the bid item included on the bid schedule for this work. Payment will be made in equal monthly installments over the life of the contract.***

This payment shall include all costs related to traffic control, detours, barricades, lights, control devices, signs, plans and other traffic control measures.

12. NOTICE TO PROCEED. No work will commence until such time that a preconstruction conference is held and Contract documents are executed. A “Notice to Proceed” with the work shall be issued. Failure to proceed within 10 days of the “Notice to Proceed” shall begin Liquidated Damages. The penalty shall be at a rate of 50% of the Liquidated Damages amount specified in the contract.

13. CONTRACTOR'S PERFORMANCE. The successful Bidder will be required to act with speed and diligence in starting and completing this work.

14. CONTRACTOR’S DAILY REPORTING INFORMATION. The contractor is to provide a Daily Construction Report to the City which contains the following information:

(A) Prepare a daily construction report, recording the following information concerning events at the site and submit duplicate copies to the City, by noon of the following workday. Each daily report is to be certified by an authorized contractor supervisor and quality control representative as to the facts, accuracy and completeness of the information of in the daily report. A copy of the contractor’s proposed daily report format is to be provided to the City for approval prior to construction.

- a. List of Prime and any subcontractors at the site.
- b. Numerical count of personnel at the site by trade craft.
- c. A list of all construction equipment on site.
- d. High and low temperatures, general weather conditions.
- e. Accidents (provide specific accident information reports).
- f. Meetings and significant decisions.
- g. Work performed by location, description and firm
- h. Quality control inspections, tests and records
- i. Unusual events.
- j. Stoppages, delays, shortages, losses.
- k. Emergency procedures taken.
- l. Orders and requests of governing authorities.
- m. Change Orders received, implemented.

- n. Services connected, disconnected.
  - o. Equipment or system tests and start-ups.
  - p. Partial Completions, occupancies.
  - q. Substantial Completions authorized.
- (B) **Stored Material Location Reports:** At weekly intervals, prepare a comprehensive list of materials delivered to and stored at the site. Forms are included in the APPENDIX. The list shall be cumulative, showing materials previously reported plus items recently delivered. Include with the list a statement of progress and delivery dates for all materials or items of equipment being fabricated or stored away from the building site. Submit copies of the list to the CITY at weekly intervals as materials are used from the stockpiles.
- (C) **Quantity Measurements, Tickets and Other Payment Information:** The contractor is to provide documentation on each Daily Report that includes measurements of unit price work performed and which is organized by the pay items included in the specifications or per the contractor's pay item breakdown. Items being paid by weight tickets, invoices, each, or other such pay method are to be organized and totaled by the contractor by appropriate pay item with each daily report. All payment information is to be measured, documented and recorded by the contractor for submission to the City with the payment requests.
15. **CONSTRUCTION CREW LIMITATIONS.** The City, acting through the Engineer, shall exercise control on the number and size of construction crews and equipment that is employed by the Contractor on the project in order to be assured that completion of the Contract will not be delayed.
16. **PRIORITY OF CONSTRUCTION.** The priority of construction will be as listed in the Schedule of Construction and Listing of Streets. The City reserves the right to alter the sequence of construction at anytime. The City reserves the right to add or delete streets and units of work from the listing based on the status of funds associated with the work that is actually required in the repair and resurfacing operations. There shall be no adjustment in contract prices or period associated with changes, additions or deletions in the quantities and with the listing of streets that may be required in the repair and resurfacing operations. Notice in writing will be given to the Contractor of changes so that materials can be ordered for the projects involved.
17. **PROGRESS SCHEDULE AND PROGRESS REPORTING REQUIREMENTS.**
- (A) ***Progress Schedule Guidelines: Submission and approval of the schedule shall be as follows:***
- a) A scheduling / pre-construction conference shall be conducted with the City to discuss specific requirements related to preparation of the contractor's schedule. This conference shall be conducted after contract award but prior to Notice to Proceed. The scheduling conference may or may not be conducted as part of the pre-construction conference.

- b) The complete system consisting of the detailed activity network and Bar Charts / Gantt Charts shall be submitted for approval within 30 days after receipt of the Notice to Proceed. The contractor shall participate in a review and evaluation of the schedule and charts with the City. Any revisions necessary as a result of this review shall also be resubmitted for approval within 10 days after the conference. This final approved schedule shall then be the schedule to be used by the contractor for planning, organizing and directing the work and for reporting and payment updates.
- c) Thereafter, if the contractor desires to make changes in his method of operating and scheduling, he shall notify the City in writing stating the reasons for the changes. If the City considers these changes to be of a major nature, they may require the contractor to revise and resubmit for approval, without additional cost to the City, all or the affected portion of the detailed diagrams and analysis to show the effect on the entire project.
- d) The review and acceptance by the City the contractor's schedule shall in no way relieve the contractor of the responsibility to complete the work within the contract time, adjusted in accordance with the provisions of the contract. Failure to include any element of work required for the performance of this contract shall not excuse the contractor from completing the work in accordance with the requirements of the contract documents.
- e) All computer generated schedules and charts shall be prepared using either Microsoft Project or Primavera software. For computer generated schedules and charts, the initial submissions and all updates are to also be provided to the City in electronic data format on suitable media.
- f) Failure to provide this information will result in progress payments being withheld or suitable monies retained to protect the City's interest until such time as the schedule is provided as required by the specifications.

***(B) General requirements for the schedule are as follows:***

- a) In preparing the schedule, the scheduling of construction activities and resource assignments is the responsibility of the contractor. The schedule and chart requirements are included to assure adequate planning and execution of the contract work and to assist the Department in appraising the reasonableness of the proposed schedule and in evaluating work progress.
- b) The overall project schedule shall be in the form of a time scaled precedence diagram and associated computer analysis and shall consist of detailed activities and their restraining relationships as required to complete the project from Notice to Proceed through completion of the Work.
- c) The schedule system shall consist of diagrams and accompanying mathematical analysis. The diagrams shall show elements of the project in detail and the entire project in summary. The diagrams shall show the order and interdependence of all activities and the sequence in which the work is to be accomplished as planned by the contractor. Detailed and/or summary networks shall be time scaled and shall be drafted to show a continuous flow of activities from left to right.
- d) The schedule shall be in sufficient detail to track the progress of each activity and the project, as a whole, on a daily basis. The progress of each activity is to be reasonable



based on the quantity of work involved and the resources assigned to the project. The longer duration construction activities shall be broken down into recognizable smaller activities so that no activity will be longer than 15 work days.

- e) The contractor is to provide a cost loaded schedule which reflects the actual bid items and amounts as included in the contract bidding schedule. When added together, the activities shall equal the total contract amount.
- f) For each activity, the schedule shall indicate the location, the duration, the quantity of work involved, the bid item, the cost and the identify of who is performing the task if other than the contractor.
- g) Each sheet shall include a title block containing as a minimum the following information:
  - Project Title and Number
  - Work Description
  - Contractor Information
  - Contractor Submittal Dated Name and Signature
  - Current Schedule Revision Number
  - Progress Computation Date (i.e. Data Date)
  - Legend of Symbols and Abbreviation as applicable
  - City of Durham Dated Reviewer and Approval Name(s)
- h) A cumulative progress-versus-time curve for the activities shall be shown. The vertical scale shall represent cumulative project progress and the horizontal scale shall represent time. Scheduled cumulative progress shall be calculated and plotted on the scale. Actual progress shall be calculated and plotted as work progresses. This project curve shall generally be plotted as an “S” curve.
- i) In addition to all construction activities required to complete the project, other activities and constraints which affect the work and project milestones shall be included on the schedule. These shall include such items applicable to the contract as:
  - required construction sequence constraints;
  - submittal, review, procurement, fabrication and delivery time of critical submittal items and shop drawings for materials and equipment;
  - storage, disposal, borrow, haul, stockpile considerations;
  - critical subcontractor operations shall be identified;
  - construction and maintenance of traffic milestones;
  - temporary detours and bridges or critical traffic openings;
  - environmental conditions or related constraints;
  - lane closures and traffic shifting;
  - hazardous materials;
  - demolition;
  - City activities that affect the work;
  - permit constrains;
  - R/W and utility issues that affect the work
  - Intermediate or phase completion date requirements.

- j) A written narrative of the schedule shall be included which describes each work element. This narrative shall list the contractor's normal workdays per week, holidays, number of shifts per day and normal work hours per shift. The listing shall also include the bid items that are included in the various activities.

**(D) *Reporting requirements are as follows:***

- a) Each schedule submission, revision or update is to be furnished in 4 copies with 1 copy on electronic data format if a computer schedule system is used.
- b) After the schedule is approved, at intervals on no less frequent than a monthly basis, and scheduled to coincide with the contractor's payment request, the contractor shall submit a report of the actual construction progress by updating the activity and cumulative schedules and charts. The report shall show the activities or portions of activities completed during the report period and their total value as a basis for the contractor's payment request. Payment will be based on the total value of such activities completed or partially completed as verified by the Department.
- c) This update is to be provided with five (5) calendar days after completion of the monthly estimate update by the contractor and City.
- d) The report shall include a narrative report with the updated analysis, which shall include a description of both current and anticipated problem areas, delaying factors and their impact, and an explanation of corrective actions taken or proposed.
- e) The report shall also include the computational information and tabulation of activities as outlined in paragraph 2 above.
- f) The contractor shall keep the Engineer informed of planned or contemplated operations on a continuing basis. At least once a week, a progress meeting with the contractor shall be conducted. The contractor shall review the schedule and advise the Engineer in writing of the progress on items for the prior week, the approximate timing for anticipated operations of the subsequent week and discuss major phases of the operation for the week(s) ahead.
- g) Failure to provide this information will result in progress payments being withheld, and/or retainage being withheld, in amount sufficient to protect the Department's interest, until such time as the updates are provided as required by the specifications.

**(E) *Measurement and Payment For The Progress Schedule Shall Be As Follows:***

The payment for the progress schedule development and updates shall be paid as a percentage of the bid amount for mobilization in the following manner. An amount of 20% of the bid amount for the mobilization bid item shall be allocated for the progress schedule requirement of the contract and paid in the following manner. Payment for the second mobilization payment will not be made until the contractor has submitted the detailed schedule package, acceptable to the Department, as required in this section of the contract. The payment shall also include furnishing the scheduling software and licensing and maintenance agreement and for conforming to all other requirements as set forth in this special provision if required. Any monies not paid for monthly updates or required revisions will be paid on the final payment request:

Pay Item

Pay Unit (20% of Mobilization Paid For Schedule System)

- |                                |   |
|--------------------------------|---|
| a) Schedule Submission         | 20% of the 20% Mobilization Bid Amount Paid Upon<br>Schedule Approval   |
| b) Monthly Schedule<br>Updates | <u>80% of 20% Mobilization Bid Amount</u><br>(the remaining 80% is paid in equal monthly installments over<br>the project duration) |

Total Paid is 100% of 20% Mobilization Bid Amount For Progress Schedule

18. CONTRACTOR QUALITY CONTROL. In accordance with the Inspection of Construction Contract Requirement, the contractor shall develop and implement a Contractor Quality Control system on subject project to ensure the construction is performed per contract requirements. The quality control system shall consist of plans, procedures, and organization necessary to produce an end product, which complies with the contract requirements. The system shall cover all construction operations, both onsite and offsite, and shall be keyed to the proposed construction sequence. The Contractor's project superintendent, quality control manager or other designated individual will be held responsible for the quality of work on the job.

A. References: The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only and refer to requirements for use of laboratory services.

(1) AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM).

(2) ASTM D 3740: (1992) Evaluation of Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction.

(3) ASTM E 329: (1993b) Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction.

B. Quality Control Plan

(1) General: The Contractor shall furnish for review by the City, not later than ten days after receipt of Notice to Proceed, the Contractor Quality Control (CQC) Plan proposed to implement the requirements of this specification. The plan shall identify personnel, control procedures, instructions, test records, and forms to be used. The City will consider an interim plan for the first 30 days of operation. Construction will be permitted to begin only after acceptance of the QC Plan (including approval of the QC Manager) or acceptance of an interim plan applicable to the particular features of work to be started. Work outside of the features of work included in an accepted interim plan will not be permitted to begin until acceptance of an QC Plan or another interim plan containing the additional features of work to be started.

(2) Content of the QC Plan: The QC Plan shall include, as a minimum, the following to cover all construction operations, both onsite and offsite, including work by sub-tier Subcontractors, fabricators, suppliers, and purchasing agents:

- i. A description of the quality control organization, including a chart showing lines of authority and responsibilities including authority to stop work which does not comply with the subcontract.
  - ii. The name, professional qualifications (in resume format), duties, responsibilities, and authorities of each person assigned a QC function.
  - iii. Testing and inspection plan that corresponds to the testing and inspection requirements of the specifications and any other applicable codes, requirements, or standards.
  - iv. The following procedures that are applicable to the work:
    - a. Shop inspection and testing of fabricated equipment.
    - b. Evaluation and pre-qualification of vendor supplied material and equipment.
    - c. Evaluation and pre-qualification of all tier Subcontractors.
    - d. Receiving, inspection, and storage of materials.
    - e. In process testing and inspection.
    - f. Final testing and inspection.
    - g. Calibration of inspection, measuring, and testing equipment.
    - h. Control of non-conforming work.
    - i. Document control and reporting.
- (3) Acceptance of Plan: Acceptance of the Contractor's plan and quality control manager is required prior to the start of construction. Acceptance is conditional and will be predicated on satisfactory performance during construction. The City reserves the right to require the Contractor to make changes in its QC Plan and/or personnel.
- (4) Notification of Changes: After acceptance of the QC Plan, the Contractor shall notify the City in writing of any proposed changes prior to implementation. Proposed changes are subject to acceptance by the City.
- c. Coordination Meeting: After the pre-construction conference and prior to the start of construction, the Contractor shall meet with the City and discuss the Contractor's quality control system. The final QC Plan shall be submitted for review a minimum of five calendar days prior to the Coordination Meeting. During the meeting, a mutual understanding of the system details shall be developed, including the forms for recording the QC operations, control activities, testing, administration of the system for both onsite and offsite work, and the interrelationship of the Contractor's management and control with quality assurance. Minutes of the meeting shall be prepared by the City and signed by both the Contractor and the City. The minutes shall become part of the contract file. There may be occasions when subsequent conferences will be called by either party to reconfirm mutual understandings and/or address deficiencies in the QC system or procedures that may require corrective action by the Contractor.
- d. Quality Control Organization: The requirements for the QC organization are a QC System Manager who shall be at the site at all times during progress of work and with complete authority from the Contractor to take any action necessary to ensure compliance with the contract. This person shall have a minimum of ten years experience on work of the complexity and magnitude of the type of work similar to this project, and must be

employed by the Contractor. The QC System Manager may have other assigned duties; however, he/she will be responsible for all matters concerning contractor quality control. The QC System Manager shall be subject to acceptance by City and approval is conditioned upon satisfactory performance.

- E. Submittals: Submittals shall be made as specified in the section of this contract entitled, “Submittals, Specifications, and Drawings”, of this document. The QC System Manager or other individual so authorized in the contractor’s quality control organization shall be responsible for reviewing and certifying that all submittals comply with the contract requirements as noted in subject submittal section.
- F. Control and Inspection of Work: Contractor Quality Control is the means by which the Contractor ensures the construction, to include that of Subcontractors of any tier and suppliers, complies with requirements of the contract. At least three phases of control shall be conducted by the Contractor and the QC System Manager for each feature of work as follows.
  - (1) Pre-work and Preparation Phase: This phase shall be performed prior to beginning work on each feature of work and shall include:
    - i. A review of each paragraph of applicable specifications.
    - ii. A review of the contract drawings and sketches.
    - iii. A check to assure that all materials and/or equipment have been tested, submitted, and approved.
    - iv. Review of provisions that have been made to provide required control inspection and testing.
    - v. Examination of the work area to assure that all required preliminary work has been completed and complies with the contract.
    - vi. A physical examination of required materials, equipment, and sample work to assure they are on hand, conform to approved shop drawings or submitted data, and are properly stored.
    - vii. A review of the appropriate activity hazards associated with the work to assure safety requirements are met.
    - viii. Discussion of procedures for controlling quality of the work including repetitive deficiencies. Document construction tolerances and workmanship standards for that feature of work.
    - ix. A check to ensure that the portion of the plan for the work to be performed has been accepted by City.
    - x. Discussion of the initial control phase.
    - xi. The City shall be notified in writing at least 24 hours in advance of beginning the preparatory control phase. This phase shall include a meeting conducted by the QC System Manager, project superintendent, other QC personnel (as applicable), and the foreman responsible for the work. The results of the preparatory phase actions shall be documented by separate notes or minutes prepared by the QC System Manager and attached to the daily report. The Contractor shall instruct

applicable workers as to the acceptable level of workmanship required in order to meet subcontract specifications.

(2) Initial Phase: This phase shall be accomplished at the beginning of a definable feature of work. This phase is used to ensure the specifications are being met and to establish procedures for quality and workmanship. The following shall be accomplished:

- i. A check of work to ensure that it is in full compliance with contract requirements. Review minutes of the preparatory meeting as necessary.
- ii. Verify adequacy of controls to ensure full contract compliance. Verify required control inspection and testing.
- iii. Establish level of workmanship and verify that it meets acceptable workmanship standards. Compare with required sample panels as appropriate.
- iv. Resolve all differences.
- v. Check safety to include compliance with and upgrading of the safety plan and activity hazard analysis. Review the activity analysis with each worker.
- vi. The City shall be notified at least 24 hours in advance of beginning the initial phase. Separate notes or minutes of this phase shall be prepared by the QC System Manager and attached to the daily report. Exact location of initial phase work samples shall be indicated for future reference and comparison with follow-up phases.
- vii. The initial phase should be repeated for each new crew to work onsite, or any time acceptable specified quality standards are not being met.

(3) Follow-up Phase: Daily checks shall be performed to assure control activities, including control testing, are providing continued compliance with subcontract requirements, until completion of the particular feature of work. The checks shall be made a matter of record in the QC documentation. Final follow-up checks shall be conducted and all deficiencies corrected prior to the start of additional features of work, which may be affected by the deficient work. The Contractor shall not build upon or conceal non-conforming work. Additional preparatory and initial phases shall be conducted on the same definable features of work if the quality of on-going work is unacceptable, if there are changes in the applicable QC staff, onsite production supervision or work crew, if work on a definable feature is resumed after a substantial period of inactivity, or if other problems develop.

G. Testing and Inspection:

(1) Independent Inspection and Testing Agencies: The Contractor shall employ and pay independent test agencies to perform specified quality control services when so indicated in the technical specifications. The Contractor may utilize their own technicians and equipment to perform the specified quality control services provided their plans, personnel, equipment and procedures are in compliance with the required technical specifications and certified to meet the required ASTM or other referenced standards. Contractor facilities shall also comply with the requirements below. Costs

for all such testing services shall be included in the contract price bid and no separate payment shall be provided.

(2) Qualification for Independent Inspection and Testing Agencies: Inspection and Testing agencies shall be pre-qualified as complying with “Recommended Requirements for Independent Laboratory Qualification” by the National Institute for Certification of Engineering Technicians (NILET) which specializes in the types of inspections and tests to be performed. Each inspector shall be certified to a minimum of Level II by NILET. Each independent Inspection and Test Agency engaged on the project shall be authorized by the authorities having jurisdiction to operate in the State of North Carolina. The City reserves the right to check laboratory equipment in the proposed laboratory for compliance with the standards set forth in the contract specifications and to check the laboratory technician's testing procedures and techniques. Laboratories utilized for testing soils, concrete, asphalt, and steel shall meet criteria detailed in ASTM D 3740 and ASTM E 329.

(3) Reporting Requirements: The Independent Inspection and Testing Agency, or contractor facilities when approved by the City, shall submit certified written reports of each inspection, test, or similar service to the Contractor's quality control manager, who will forward the report to the City. The written reports shall include, but not be limited to:

- i. Date of issue.
- ii. Project title and number.
- iii. Name, address, and telephone number of testing agency.
- iv. Dates and locations of samples and test or inspections.
- v. Names of individuals making the inspection or test.
- vi. Designation of the work or test method.
- vii. Identification of product and Specification Section.
- viii. Complete inspection or test data.
- ix. Test results and an interpretation of test results.
- x. Ambient conditions at the time of sample taking and testing.
- xi. Comments or professional opinion as to whether inspected or tested work complies with contract document requirements and/or applicable codes.
- xii. Name and signature of laboratory inspector.
- xiii. Recommendations on retesting.

(4) General Testing Procedures: The Contractor shall perform specified or required tests to verify that control measures are adequate to provide a product that conforms to contract requirements. Upon request, the Contractor shall furnish to the City duplicate samples of test specimens for possible testing by the City. Testing includes operation and/or acceptance tests when specified. The Contractor shall perform the following activities and record and provide the following data:

- i. Verify that testing procedures comply with contract requirements.

- ii. Verify that facilities and testing equipment are available and comply with testing standards.
- iii. Check test instrument calibration data against certified standards.
- iv. Verify that recording forms and test identification control number system, including all of the test documentation requirements, have been prepared.
- v. Results of all tests taken, both passing and failing, will be recorded on the QC report for the date taken. Specification paragraph reference, location where tests were taken, and the sequential control number identifying the test will be given. If approved by the City, actual test reports may be submitted later with a reference to the test number and date taken. An information copy of tests performed by an offsite or commercial test facility will be provided directly to the City. Failure to submit timely test reports as stated may result in nonpayment for related work performed and disapproval of the test facility for this subcontract.

H. Completion Inspection

- (1) Pre-Final Inspection: At the completion of all work or any increment thereof established by a completion time or stated elsewhere in the specifications, the QC System Manager shall conduct an inspection of the work and develop a "punch list" of items which do not conform to the approved drawings and specifications. Such a list of deficiencies shall be included in the QC documentation, as required by sub-paragraph K, Documentation, below, and shall include the estimated date by which deficiencies will be corrected. Once this is accomplished, the Contractor shall notify the City in writing that the facility is complete and is ready for the City's "Pre-final" inspection. The City will perform this inspection to verify the facility is complete and ready to be occupied. A City "Pre-final Punch List" will be developed because of this inspection. The QC System Manager shall ensure that all items on this list have been corrected and so notify the City so that a "Final" inspection can be scheduled. Any items noted on the "Final" inspection shall be corrected in a timely manner. These inspections and any deficiency corrections required by this paragraph will be accomplished within the time slated for completion of the entire work or any particular increment thereof if the project is divided into increments by separate completion dates.
- (2) Final Acceptance Inspection: The Contractor's Quality Control Inspection personnel, its superintendent or other primary management person and a City representative will be in attendance at this inspection. Additional personnel may also be in attendance. The final acceptance inspection will be formally scheduled by the City based on notice from the Contractor. This notice will be given to the City at least 14 days prior to the final acceptance inspection and must include the Contractor's assurance that all specific items previously identified to the Contractor as being acceptable, along with all remaining work performed under the contract, will be complete and acceptable by the date scheduled for the final acceptance inspection.
- I. Documentation: The Contractor shall maintain current records providing factual evidence that required quality control activities and/or tests have been performed. The



following quality assurance records are required to be prepared and maintained by the Contractor as applicable:

- Contractor Quality Control Plan.
- Coordination Meeting Minutes.
- Submittal Register.
- Material Test Reports.
- Daily and Phase Inspection Reports.
- Material Deficiency Reports.
- Corrective Action Reports.
- Calibration Reports.
- Qualification Reports.

- i. Notification Of Noncompliance: The City will notify the Contractor of any detected noncompliance with the foregoing requirements. The Contractor shall take immediate corrective action after receipt of such notice. Such notice, when delivered to the Contractor at the worksite, shall be deemed sufficient for the purpose of notification. If the Contractor fails or refuses to comply promptly, the City may issue an order stopping all or part of the work until satisfactory corrective action has been taken. A Corrective Action Report (CAR) will be completed upon correction of non-compliant work. No part of the time lost due to such stop orders shall be made the subject of claim for extension of time or for excess costs or damages by the Contractor.

19. SAWING CONCRETE PAVEMENT. In locations where it is necessary to cut concrete pavement, the Contractor shall be required to saw the concrete pavement at such locations to be designated by the Engineer. The Contractor will only be paid for sawing that section of concrete pavement which is designated by the Engineer to be replaced. It shall be the Contractor's responsibility to avoid damage to concrete not to be replaced.

20. REPAIR OF EXISTING STREETS: The Contractor's attention is directed to the fact that there may be numerous areas on the listing of streets to be repaired and re-surfaced for which there may be extensive amounts of repairs that may be required prior to resurfacing. The areas and method of repair will be identified in the field during the construction by the Engineer. The areas and method of repairs will vary from limited patching, to milling of areas of variable depth, to partial pavement structure removal and reconstruction and to possible full depth pavement structure removal and reconstruction. Information pertaining to the repair methods, payment methods and work to be performed are outlined in the following and on the Sketches included in the Appendix to this contract. The Engineer will review the actual repairs to be performed in the field with the Contractor for each street location prior to the start of work for that location. The repair work will be coordinated with available funding and the contractor should anticipate that the repairs will need to be coordinated with the resurfacing operations to minimize disruption to the public.

- a. Milling Asphalt Pavement for Repairs: Milling operations are to be performed as outlined in NCDOT Section 607. Milling may be performed in various depths as

indicated in the field by the Engineer depending on the application of the milling operation for pavement transitions, at curb and gutter edges, over structures, at speed bumps and for partial depth milled pavement repairs. Partial depth milled pavement repairs shall be performed for depths of up to 4-1/2 inches as indicated in the field by the Engineer. The minimum tolerance for milling directed by the Engineer is 1 inch.

The Engineer may elect to vary the depths of milling in the field.

- i. Pavement milling depths of up to 1-1/2 inches shall be measured by the square yard per inch of depth up to a total of 1-1/2 inches as outlined in the NCDOT standard. Milling performed under this application shall be paid under bid item number 2a for depths of 0 to 1-1/2 inches as included in the contract. The unit price to be bid is for milling to a depth 1-1/2 inches. The unit price will be prorated uniformly for depths less than 1-1/2 inches.
  - ii. Pavement milling depths of 1-1/2 inches up to 3 inches shall be measured by the square yard per inch of depth up to a total of 3 inches as outlined in the NCDOT standard. Milling performed under this application shall be paid under bid item number 2b for depths of 1-1/2 to 3 inches as indicated in the contract. Measurement of the depth to be paid for under this bid item for milling will begin at 1-1/2 inches. The unit price to be bid is for milling to a depth of 3 inches. The unit price will be prorated uniformly for depths less than 3 inches to the minimum milling depth under this bid item of 1-1/2 inches. Note that no payment will be provided under bid item 2a for work performed to the depth indicated under this bid item.
  - iii. Pavement milling depths of up to 4-1/2 inches shall be measured by the square yard per inch of depth up to a total of 4-1/2 inches as outlined in the NCDOT standard. Milling performed under this application shall be paid under bid item number 2c for depths of 3 to 4-1/2 inches as indicated in the contract. Measurement of the depth to be paid for under this bid item for milling will begin at 3 inches. The unit price to be bid is for milling to a depth of 4-1/2 inches. The unit price will be prorated uniformly for depths less than 4-1/2 inches to the minimum milling depth under this bid item of 3 inches. Note that no payment will be provided under bid item 2a or 2b for work performed to the depth indicated under this bid item.
- b. Patching and Partial Depth Repairs: Areas to be partial depth repaired may be milled, or shall be saw-cut as directed in the field, to the appropriate depth and limits. For limited depth repairs of up to 10 inches in depth, the areas shall have the existing pavement structure milled and removed to the noted depth and limits and area repaired prior to resurfacing. For repairs in excess of 4-1/2 inches in depth but which do not required a complete removal of the existing pavement structure below subgrade, the area is to be saw-cut, the existing pavement structure materials shall be excavated and removed to the depth indicated, and the area repaired prior to resurfacing. It is anticipated that this work will be performed at a total depth of not

more than 10 inches below the top of the existing pavement. The work under this pay item is not anticipated to extend below the existing pavement structure and into the subgrade. All excavation and repairs should be performed within the existing pavement structure and above the top of subgrade.

The repair of the existing pavement for patching and partial depth repairs shall consist of NCDOT asphalt concrete base course, Type B25.0B. The minimum and maximum thickness of each layer of asphalt concrete base course is 3.0 and 5.5 inches, respectively. For thicker lifts, place the asphalt base course material in two equal layers. At the direction of the Engineer, a layer of intermediate asphalt material, Type I19.0B, may also be used. Machine compact the asphalt concrete base and intermediate course as appropriate. Hand compaction equipment may be used in small areas. Perform compaction of the base course material at transverse joint by the use of mechanical hand tamps or other equipment approved by the Engineer in order to achieve the required density. Conditioning, compaction and testing of the existing aggregate base course material to provide support for the new pavement structure is included in the work to be performed under this bid item.

Do not excavate the pavement structure below the plane of the bottom of the existing pavement structure and into the subgrade, unless otherwise directed by the Engineer. In the event it becomes necessary to excavate below the existing pavement structure, measurement and payment for all labor, equipment, and incidentals necessary to complete the excavation and repair shall be made in accordance with the provisions of full depth payment structure repair as noted below.

The repair of the existing pavement for patching and partial depth repairs includes but is not limited to the milling or cutting of the existing pavement to a neat vertical joint and uniform line; the removal and disposal of existing pavement and/or base material as approved or directed by the Engineer, conditioning of the existing base material or asphalt surface on which the new asphalt base course material is to be placed and the coating of the area to be repaired with a tack coat prior to placement of the asphalt concrete base course, Type B25.0B, and/or asphalt intermediate course, Type I19.0B.

Testing of the repair areas is to be performed in accordance with NCDOT standards. The contractor is responsible for all testing associated with this work and the cost for this work is to be included in the associated bid items. This shall include testing of the existing or conditioned aggregate base course, if present, and testing of the asphalt materials used for the repair.

Construct the pavement repair in a manner such that the surface of the complete repair will match the surface of existing pavement such that the area may be uniformly resurfaced.

Measurement and Payment: The quantity of repair of existing pavement for partial depth repairs to be paid for will be the actual number of tons of asphalt concrete base course, Type B25.0B, and/or asphalt intermediate course, Type I19.0B, paid at the contract unit price per ton, which has been incorporated into the completed and accepted work. The quantity of milling will be the approved area measured in square yards that has been milled to the appropriate depth as indicated and will be paid under the appropriate bid item. The quantity of pavement structure removal will be the approved area of pavement structure that has been cut, excavated, reconditioned, compacted and restored to accept the new asphalt concrete base course materials, measured in square yards. Furnishing asphalt binder for the mix will be paid for as provided in Article 620-5 of the Standard Specifications. All other work associated with partial depth repairs shall be considered incidental to the work.

- c. Full Depth Repairs: Areas to be repaired under this bid item shall be removed to a depth of up to 18 inches below the top of the existing pavement and reconstructed using a combination of aggregate base course, an asphalt base course and/or an asphalt intermediate course as directed in the field by the Engineer. For full depth repairs, the areas shall have the existing pavement structure removed to the noted depth and limits and the area shall be reconstructed and repaired or conditioned prior to resurfacing. For full depth repairs, the area is to be saw-cut and the existing pavement structure materials shall be excavated and removed to the depth indicated.

Satisfactory materials are to be reused in the reconstruction as directed by the Engineer. Unsuitable, unsatisfactory and any excess materials not required for the reconstruction shall be removed and disposed of by the Contractor. The subgrade shall be restored to a condition to provide suitable support for the new pavement structure as determined by the Engineer. The reconstruction of the full depth repair shall consist of the conditioning of the existing subgrade, placement of up to 10 inches of NCDOT aggregate base course, the placement of up to 3-6 inches of asphalt concrete base course, Type B25.0B, and/or the placement of up to 2.5 to 4 inches of asphalt concrete intermediate course, Type I19.0B, to attain the existing pavement elevation profile. Machine compact the asphalt concrete base and intermediate course as appropriate. Hand compaction equipment may be used in small areas. Perform compaction of the base course material at transverse joint by the use of mechanical hand tamps or other equipment approved by the Engineer in order to achieve the required density. Conditioning, compaction and testing of the prepared subgrade and aggregate base course material to provide support for the new pavement structure is included in the work to be performed under this bid item.

Do not excavate the pavement structure to a depth of 18 inches below the plane of the existing pavement, unless otherwise directed by the Engineer. In the event it becomes necessary to excavate below this depth to repair and reconstruct the existing pavement structure, measurement and payment for all labor, equipment, and incidentals necessary to complete the excavation and repair shall be made in

accordance with the provisions of the Changes Clause as noted in this contract.

For a lift thickness of up to 10 inches, the aggregate base course may be placed in one layer. The minimum thickness of each layer of aggregate base course material is 4 inches. Each layer of aggregate base course material shall be compacted to the density requirements as outlined in the NCDOT Standard Specifications. The subgrade for the aggregate base course material is to be restored and compacted to provide suitable support for the new pavement structure.

The minimum and maximum thickness of each layer of asphalt concrete base course and intermediate asphalt course is 3.0 to 5.5 inches and 2.5 to 4 inches, respectively. For thicker lifts, place the asphalt material in two equal layers. Machine compact the asphalt concrete base and intermediate course as appropriate. Hand compaction equipment may be used in small areas. Perform compaction of the base course material at transverse joint by the use of mechanical hand tamps or other equipment approved by the Engineer in order to achieve the required density.

Testing of the repair areas is to be performed in accordance with NCDOT standards. The contractor is responsible for all testing associated with this work and the cost for this work is to be included in the associated bid items.

Construct the pavement repair in a manner such that the surface of the complete repair will match the surface of existing pavement such that the area may be uniformly resurfaced. The Engineer may elect to vary the types and thickness layers of the repair materials to best meet field conditions.

Measurement and Payment: The quantity of repair of existing pavement for full depth repairs to be paid for will be the actual number of tons of aggregate base course material, asphalt concrete base course material Type B25.0B, and/or asphalt concrete intermediate course material Type I19.0B, paid at the contract unit price per ton, which has been incorporated into the completed and accepted work. The quantity of pavement structure removal will be approved area of pavement structure that has been cut, excavated and restored to accept the new pavement structure, measured in square yards. Furnishing asphalt binder for the mix will be paid for as provided in Article 620-5 of the Standard Specifications. All other work associated with full depth repairs shall be considered incidental to the work.

Such prices and payment as noted above will be full compensation for the work covered by this provision for patching, milling, partial depth and full depth pavement repairs. Schedule operations so that all areas where pavement has been removed will be repaired on the same day of the pavement removal and all lanes of traffic shall be restored. The Contractor will be restricted to repairing one side of the existing pavement at a time unless otherwise permitted by the Engineer.

21. PRICE ADJUSTMENT – ASPHALT BINDER FOR PLANT MIX:

Price adjustments for asphalt binder for plant mix will be made in accordance with Section 620 of the NCDOT Standard Specifications as modified herein. Article 620-5 of the 2002 Standard Specifications states that adjustments will be made to payments due the Contractor for each grade of asphalt binder when it has been determined that the monthly average terminal F.O.B. Selling Price of asphalt binder, Grade PG 64-22, has fluctuated by more than 5% from the Base Price Index for Asphalt Binder included in the Project Special Provisions.

The specifications also state that the methods for calculating the monthly average terminal F.O.B. selling price, for calculating a base price index, and for determining the terminals used are in accordance with procedures on file with the Department's Construction Unit, Pavement Construction Section. These methods and procedures, including procedures for determining the adjusted contract unit price, are as follows:

Determination, Addition and/or Deletion of Terminals Included in Index

All terminals supplying asphalt binder for use on state projects in North Carolina will be given an opportunity to be included in the index average. A review will be made by the Department after the end of each calendar year to determine which terminals supplied asphalt binder on a regular basis during the previous year. Based on the results of this review, adjustments will be made annually to the listing of terminals used in determining the Monthly Price Index for asphalt binder. Any adjustments will be effective beginning with the May Monthly Price Index and the Base Price Index for the July letting of each year.

Monthly Average Terminal F.O.B. Selling Price of Asphalt Binder, Grade PG 64-22

(Monthly Price Index)

Asphalt binder suppliers included on the listing of terminals used for the index will furnish to the Department by the third day of the each month the terminal F.O.B. selling price of Asphalt Binder, Grade PG 64-22 in effect on the first day of each month at each terminal. The monthly average terminal F.O.B. selling price (Monthly Price Index) will then be determined based on a procedural average of the terminal F.O.B. selling prices by omitting a single terminal with the highest price and a single terminal with the lowest price and then averaging the remainder of the prices furnished by the suppliers. The average will be rounded to the nearest penny and that number will be used as the Monthly Price Index for asphalt binder for that particular month. In the event that a supplier does not furnish a price to the Department for a specific terminal on the list, then the Monthly Price Index will be determined from the remaining terminals.

The base price index for asphalt binder for plant mix is \$247.50 per ton. The base price index represents an average of F.O.B. selling prices of asphalt binder at the supplier's terminals on January 1, 2006.

22. TRAFFIC CONTROLS AND SIGNILIZATION AND PAMEMENT STRIPPING. The Contractor shall exercise care to avoid damage to existing control wiring for traffic signalization. The City of Durham Traffic Engineer, Phil Loziuk (560-4366, ext. 302), and/or Street Superintendent, Pete D'Orazio, (560-4312, ext. 225), shall be notified 24 hours

in advance of any work that may disrupt traffic controls and signalization or pavement markings to allow for temporary traffic controls or markings to be implemented. The Contractor shall provide assistance to the City of Durham Traffic Engineer to identify this control wiring and to provide reasonable means to preserve and protect the existing wiring and controls where feasible. The Contractor is not responsible for providing new control wiring in the new pavement for those intersections and traffic signalization devices that may be affected by this contract.

The Contractor shall notify the City of Durham Street Superintendent 24 hours in advance of paving operations to allow for identification of existing pavement markings prior to their removal due to the Contractor's repairs or resurfacing. The Contractor is not responsible for remarking or re-stripping of the streets. The Contractor shall notify the City of Durham Street Superintendent immediately upon completion of the resurfacing operation for a particular street so the remarking and re-stripping can be scheduled. The remarking and re-stripping operation will be performed by the City of Durham forces.

23. EMERGENCY WORK. The Contractor shall perform emergency work as required from time to time by the City. (Such work may include, but shall not be limited to, pavement replacement, property or driveway restoration, grading, clean-up, seeding, and mulching.) In such instances, the Engineer shall give the Contractor a written notice of each item of required work or incident. (Each severable part of that work shall be considered a separate item or incident; e.g., if three driveways must be restored, then the restoration of each driveway will be a separate item or incident.) If the Contractor fails, within seventy-two (72) hours of receipt of that notice, to perform that work, the City may do or cause some or all of that work to be done. If the emergency work is a non-pay item, then the City will charge all costs and expenses of that work, plus the City's then-current overhead charge, to the Contractor, and deduct those amounts from any money that may be due the Contractor on the next estimate (or following estimates if the next estimate is insufficient) or the final payment. If the emergency work is a pay item, then the City will charge the costs and expenses of the Work to the work order, plus an administrative and overhead charge of one hundred dollars per item of required work or incident, from any money that may be due the Contractor on the next monthly estimate (or following estimates if the next estimate is insufficient) or the final payment.
24. PROPOSED SUPERINTENDENT OR FOREPERSON. The Contractor shall furnish the City, on the forms herein provided, the name of the foreperson or forepersons proposed to use on the Work, stating what experience the proposed person has had and the location of previous jobs supervised. The length of time must be specified as to supervisory experience of the foreperson or forepersons. The Contractor shall list the equipment proposed to be used for the construction of the project.
25. TEMPORARY CHECK DAMS. Where indicated by the Engineer or Inspector, the Contractor shall install check dams in ditches. All costs associated with the installation, maintenance, and removal of check dams shall be paid for in the unit price for Class A

riprap.

26. CRIMPING ALONG ROADWAYS. The Contractor shall stabilize all mulching material between the roadway and the ditch line by the use of a "crimper".
27. ENCROACHMENTS. The Contractor shall become familiarized with all the provisions of the Encroachment Agreements required for this Contract. The Encroachment Agreements are available in the Department of Public Works, 101 City Hall Plaza, Durham, North Carolina.



## **GENERAL SPECIFICATIONS**

### **STREET REPAIRS AND RESURFACING**

1. **TREATMENT OF EDGE OF RESURFACING:** The edge of the resurfacing asphalt shall be treated in one of the following three methods. The methods selected shall be at the discretion of the Engineering Inspector in the field on a case by case basis. These methods apply to the edge of the resurfacing asphalt running along the existing edge of pavement, or along the existing curb and gutter. The edge may be either, or a combination of the following:
  - **Untreated Full Depth Edge** – The edge of the resurfacing asphalt running along the existing edge of a strip paved street can be untreated, requiring no feathering or milling. This edge is a full depth section of the resurfacing asphalt.
  - **Feathered Edge** – The edge of the resurfacing asphalt running along the existing edge of a strip paved street or curb and gutter street can be feathered. This edge is reduced down from full depth at a rate of ½ inch of fall per foot of run. The feathered edge shall terminate with a ½ inch depth of resurfacing asphalt.
  - **Milled and Feathered Edge** – The edge of the resurfacing asphalt running along the existing edge of a curb and gutter street can be milled and feathered. Milling shall be a width of three feet from the edge of gutter running with the street and to a depth of ½ inch below the edge of gutter. The resurfacing asphalt is then placed with the edge reduced down from full depth at a rate of ½ inch of fall per foot of run. The feathered edge shall terminate with a ½ inch depth of resurfacing asphalt.
  - **Feathering at Drives** – In all cases, all drives shall be feathered to allow a smooth transition from the newly resurfaced street to the drive entrance. The asphalt at the entrance drive is reduced down from full depth to a rate of ½ inch of fall per foot of run. The feathered edge shall terminate with a ½ inch depth of resurfacing asphalt. The feathering is an incidental cost of the resurfacing.
2. **MILLING SPEED HUMPS:** Where speed humps are encountered within the limits of the street to be resurfaced, the following methods shall be used. The resurfacing shall be terminated on both sides of the approach to the speed hump. The terminated edge of the resurfacing asphalt (running parallel to the speed hump) shall be milled and feathered. Milling shall begin one foot in advance of the speed hump. Milling shall be at a width of three to four feet to a depth of 1-1/2 inch below the existing street surface. The resurfacing asphalt is then placed with the edge reduced down from full depth at a rate of ¼ inch of fall per foot of run. The edge shall terminate flush with the existing pavement one foot from the speed hump.
3. **ASPHALT PADDING OF ADJUSTMENTS:** Manholes and OC or valve boxes can be adjusted a maximum of two weeks in advance of resurfacing. Adjustments completed more

than three days in advance of resurfacing must be padded with asphalt. Adjustments made three days or less in advance of resurfacing does not require asphalt padding. The asphalt padding shall be placed at a slope of one inch fall per foot of run. The asphalt for padding is an incidental cost of the adjustment.

4. PAINING MILLED EDGES: All vertical milled asphalt edges that cross the flow of traffic shall be painted orange to make them visible to motorist. Painting applies only to vertical milled edges that are transverse to the traffic lane. Milled vertical edges running parallel to the traffic lane do not require painting. Painting is required at the time of milling, prior to traffic being allowed to drive over the milled area. The painting is an incidental cost of the milling.
5. PAINING ADJUSTMENTS: All adjustments, manholes, and OC or valve boxes, must have the vertical rim spray painted with orange paint to make them visible to the motorist. Only the exposed vertical rim requires painting. The horizontal surface of the manhole cover or valve cover does not need to be painted. Painting is required at the time of the adjustment, prior to traffic being allowed to drive over the adjusted structure. The painting is an incidental cost of the adjustment.
6. GRAVEL ON STRIP PAVED STREETS: The Contractor shall coordinate with the Street Maintenance Department when placing full depth asphalt on existing strip paved streets. Street Maintenance shall be contacted to place stone as needed along low shoulders and at gravel driveways to allow for a smooth transition.
7. SEEDING AND MULCHING. Seeding and mulching is to be performed according to North Carolina Department of Transportation and Highway Safety requirements, Section 1660, with the following special provisions. Seeding and mulching shall be done on all earth areas disturbed by construction or as designated by the Engineer. In order to prevent excessive soil erosion and siltation by establishing a grass cover as soon possible, the Contractor shall complete clearing and grubbing and perform seeding and mulching work within fourteen (14) calendar days as the clearing progresses unless the Engineer approved a specific permissible length of delay due to circumstances beyond the control of the Contractor. Special attention is called to the portion of Section 1660-4 of the North Carolina Department of Transportation and Highway Safety Specifications dealing with seed bed preparation. This project consists primarily of Type I seeding and mulching. Type II seeding and mulching generally shall not be used.

A. Type I:

Type I seeding and mulching consists of loosening the soil by scarifying or other method to a depth of not less than 5 inches except as otherwise provided in Section 1660-4 or directed by Engineer. Clods shall be broken and the top 2 to 3 inches of soil shall be worked into an acceptable seed bed by the use of soil pulverizers, drags, or harrows; or by other methods

approved by the Engineer. All rock and debris 1 inch or larger shall be removed on cut or fill slopes which are 3:1 or flatter, medians, shoulders, and ditch slopes prior to the application of seed and fertilizer. Type I seeding and mulching will be required in all residential areas.

B. Type II:

Type II seeding and mulching consists of loosening the soil by scarifying or other method to a depth of not less than 5 inches except as otherwise provided in Section 1660-4 or directed by Engineer. Clods shall be broken and the top 2 to 3 inches of soil shall be worked into an acceptable seed bed by the use of soil pulverizers, drags, or harrows; or by other methods approved by the Engineer. All rock and debris 3 inches or larger shall be removed on cut or fill slopes which are 3:1 or flatter, medians, shoulders, and ditch slopes prior to the application of seed and fertilizer. Type II seeding and mulching will be required in all areas except for residential areas. **Type II seeding and mulching will be required in all non-residential areas.**

Seeding: Superficial scratching of the slope surface will not be sufficient seed bed preparation. On 2:1 or 1-1/2:1 slopes, a seed bed preparation will be required approaching the degree of preparation required on flatter areas as far as depth is concerned although the same degree of smoothness of seed bed will not be required.

The kind of seed, the rate of application of seed, fertilizer and limestone, and the seasonal limitations shall be as follows:

All rates are in pounds per 100 square yards.

Aug. 15 - Oct. 30

Feb. 15-June 15

Nov. 1-Feb. 1

5.5 lbs. Fescue

20 lbs. 10-10-10 Fertilizer

25 lbs. 8-8-8 Fertilizer

70 lbs. Limestone

5.5 lbs. Fescue

2 lbs. Rye

20 lbs. 10-10-10 Fertilizer

25 lbs. 8-8-8 Fertilizer

70 lbs. Limestone

Limestone shall contain not less than 85% of calcium and magnesium carbonates and shall conform to the following minimum screening standards. 100% must pass through U.S. standard 10 mesh screen, and 40% must pass through U.S. standard 100 mesh screen.

Equipment to be used for the application, covering and compaction of limestone, fertilizer, and seed shall be approved by the Engineer before being used on the project.

Application of seed and fertilizer in water suspension or by air blast methods will not be permitted on slopes flatter than 2:1. Should a hydraulic seeder be used for application of

seed and fertilizer, the seed shall not remain in water containing fertilizer for more than thirty minutes prior to application.

The contractor shall be responsible for the establishment of adequate ground cover to be determined by the Engineer or Inspector. If adequate ground cover is not established in a reasonable amount of time, determined by the Engineer or Inspector then the Contractor will be required to reseed the project until such time that adequate ground cover is established.

Mulching: Mulch shall be spread uniformly over the area by hand or by means of appropriate mechanical spreaders or blowers to obtain a 75% ground cover. It is the intent of this specification that satisfactory application shall allow some sunlight to penetrate and air to circulate, but also partially shade the ground, reduce erosion and conserve soil moisture. Care shall be exercised to prevent displacement of soil or seed or other damage to the seeded area during mulching operations. No seeded areas shall be allowed to remain for more than twenty-four hours without mulching having been completed.

The Contractor will be required to take sufficient precautions, approved by the Engineer or Inspector, to prevent mulch entering catch basins or pipelines through displacement by wind, water, or other causes. The Contractor shall apply 150 gallons per acre of asphalt tack to insure that the mulch is properly held in place. The Contractor can use a "crimper" to stabilize the mulching instead of asphalt tack.

In the application of fertilizer in seeding operations, or in the application of asphalt materials during mulching operations, adequate precautions shall be taken to prevent damage to traffic, traffic signs, curb and gutter, or any other concrete or metal structures. Such structures shall be adequately covered or application methods changed so as to avoid damage. Where any damage occurs as a result of the Contractor's failure to take adequate precautions, the Contractor will be required to repair such damage including any cleaning that may be necessary before final acceptance of the work will be made.

Once an area has been seeded and mulched, the Contractor is required to take adequate precautions to insure that all future construction operations do not damage these areas. No payment will be made for repairs of any kind that are due to negligence of the Contractor.

8. MATting FOR EROSION CONTROL: Where directed by the Engineer or Inspector the Contractor shall place excelsior matting for erosion control.

Placing of matting shall be done immediately following seeding. The surface shall be smooth and free from stones, clods, or debris which will prevent the contact of the matting with the soil. Care shall be taken to preserve the required line, grade, and cross section of the area covered.

Matting shall be unrolled in the direction of the flow of water, and shall be applied without stretching so that it will lie smoothly but loosely on the soil surface. The up-channel or top

of slope end of each piece of matting shall be buried in a narrow trench at least 5 inches deep and tamped firmly. After the end of the matting is buried, the trench shall be closed and tamped firmly. Where one roll of matting ends and a second roll begins, the end of the upper roll shall be brought over the buried end of the second roll so that there will be a 6 inch overlap. Check slots shall be constructed at each 50 feet longitudinally in the matting or as directed by the Engineer. These slots shall be narrow trenches at least 12 inches deep. The matting shall be folded over and buried to the full depth of the trench, after which the trench shall be closed and firmly tamped. Where 2 or more widths of matting are laid side by side, the overlap shall be at least 4 inches.

Staples shall be placed across the matting at ends, junctions, and check slots and shall be placed 10 inches apart. Staples shall also be placed along the outer edger and down the center of each strip of matting and shall be spaced 3 feet apart. Staples shall be placed along all lapped edges 2 to 3 feet apart.

Excelsior matting shall be installed with the fabric on the top side.

9. DETECTABLE WARNING SYSTEM. All wheelchair ramps shall conform with NCDOT standards incorporating a detectable warning surface. Detectable warning surfaces shall be either truncated dome concrete paving blocks or truncated dome stamped concrete. Obtain a 70 percent contrast visibility with adjoining surfaces, with a light colored wheelchair ramp and a dark colored detectable warning surface.

The stamped concrete shall be a minimum of 6 inches thick exclusive of the dome height. The color contract shall be achieved by incorporating pigment into the concrete mix. Painting shall not be allowed.

The paving blocks shall be placed on a 6 inch concrete base. The paving blocks shall be a minimum of three (3) inches thick.

The Contractor shall submit wheel chair detectable warning surface shop drawings and material specifications for approval. Payment for the construction of the handicap ramp shall be by two line items, '6" Concrete Sidewalk or Driveway' by the Square Yard and 'Wheelchair Ramp Detectable Warning Surface' for Each ramp.

## **PROJECT SPECIAL CONDITIONS**

**REVISIONS TO NCDOT STANDARD SPECIFICATIONS:** The following revisions to the 2002 NCDOT Standard Specifications are incorporated into this contract as noted herein.

**GENERAL:** Note that not all sections and pay items in the following NCDOT revisions will be required for this project. If a section or item is referenced elsewhere in these specifications or the drawings and sketches made a part of this contract, and a specific pay item is not included in the bidding schedule, it shall be understood that payment for such work is considered incidental and is included in other bid items as listed in the bidding schedule.

### **ASPHALT PAVEMENTS - SUPERPAVE**

**05-17-05**

**Rev. 08-02-05**

Revise the *2002 North Carolina Department of Transportation Standard Specifications* as follows:

#### **SECTION 600 - PRIME COAT**

##### **Article 600-9**

- a. Delete the first paragraph and substitute the following:

The quantity of prime coat to be paid will be the number of gallons (liters) of prime coat material that has been satisfactorily placed on the roadway. Each distributor load of prime coat material delivered and utilized on the project will be measured. Deductions will be made from each measured tank of material for all material placed on the roadway that exceeds the application rate established by the Engineer by more than 0.03 gallons per square yard (0.14 liters per square meter).

#### **SECTION 605 - ASPHALT TACK COAT**

##### **Article 605-8**

- a. Insert the following after paragraph one:

Take necessary precautions to limit the tracking and/or accumulation of tack coat material on either existing or newly constructed pavements. Excessive accumulation of tack may require corrective measures.

#### **SECTION 609 – QUALITY MANAGEMENT SYSTEM FOR ASPHALT PAVEMENTS**

##### **Article 609-4: FIELD VERIFICATION AND JOB MIX FORMULA ADJUSTMENTS**

- a. Delete the first sentence in the first paragraph and substitute the following:

Conduct field verification of the mix at each plant within 30 calendar days prior to initial production of each mix design, when required by the Allowable Mix Adjustment Policy and when directed as deemed necessary.

- b. Delete the last sentence of the third paragraph and substitute the following:

Retain records of these calibrations and mix verification tests, including Super pave Gyratory Compactor (SGC) printouts, at the QC laboratory. In addition, furnish copies, including SGC printouts, to the Engineer for review and approval within one working day after beginning production of the mix.

- c. Add the following sentence at the end of the last paragraph:

Any mix produced that is not verified may be assessed a price reduction at the Engineer's discretion in addition to any reduction in pay due to mix and/or density deficiencies.

## **Article 609-5: CONTRACTOR'S QUALITY CONTROL SYSTEM**

### **Sub article 609-5(A): Personnel Requirements**

- a. Add the following sentence at the end of the third sentence in this paragraph:

This person is responsible for monitoring all roadway paving operations and all quality control processes and activities, to include stopping production or implementing corrective measures when warranted.

### **Sub article 609-5(C) 1**

- a. Delete the second sentence in the second paragraph and substitute the following:

Retain the QC compacted volumetric test specimens for 5 calendar days, commencing the day the specimens are prepared.

### **Sub article 609-5(C) 2**

- a. At the bottom of this page, delete the sentence directly above the Accumulative Production Increment and substitute the following:

Sample and test the completed mixture from each mix design at the following minimum frequency during mix production:

- b. In the first full paragraph on this page, add to the reference AASHTO T 168 "Modified"

Revise Items B, C, D and E on this page as follows:

- B. Gradation on Recovered Blended Aggregate from Mix Sample (AASHTO T 30 Modified) Grade on all sieves specified on JMF
- C. Maximum Specific Gravity (AASHTO T 209 or ASTM D 2041), optional

(ASTM D 6857)

- D. Bulk Specific Gravity of Compacted Specimens (AASHTO T166), optional (ASTM D 6752), Average of 3 specimens at  $N_{des}$  gyrations (AASHTO T 312)
- E. Air Voids (VTM) (AASHTO T 269), Average of 3 specimens at  $N_{des}$  gyrations

Page 6-11, **Sub article 609-5(C) 2**

At the top of this page, delete Item B.,” Reclaimed Asphalt Pavement...” and substitute the following:

- B. Reclaimed Asphalt Pavement (RAP) Binder Content and Gradation (AASHTO T 308 Modified or T 164 and AASHTO T 30 Modified) (sampled from stockpiles or cold feed system at beginning of production and weekly thereafter). Have RAP approved for use in accordance with Article 1012-1(G). (Split Sample Required)

Page 6-11, **Sub article 609-5(C) 2**

Insert the following sampling and testing at the end of this Sub article:

- F. Uncompacted Void Content of Fine Aggregate, AASHTO T 304, Method A (natural sand only). Performed at Mix Design and when directed as deemed necessary. (Split Sample Required)
- G. Reclaimed Asphalt Shingle Material (RAS) Binder Content and Gradation (AASHTO T 308 Modified or T 164 and AASHTO T 30 Modified) (sampled from stockpiles or cold feed system at beginning of production and weekly thereafter). Have RAS approved for use in accordance with Article 1012-1(F). (Split Sample Required)

**CONTROL CHARTS**

Page 6-11, **Sub article 609-5(C) 3**

Delete the first paragraph and substitute the following:

Maintain standardized control charts furnished by the Department at the field laboratory. For mix incorporated into the project, record full test series data from all regularly scheduled random samples or directed samples which replace regularly scheduled random samples, on control charts the same day the tests are obtained.

In addition, partial test series results obtained due to reasons outlined in Sub article 609-5(C) 2 will be reported to Quality Assurance personnel on the proper forms, but will not be plotted on the control charts.

Page 6-12, **Sub article 609-5(C) 3**

Delete item 3 in the list below the second full paragraph and substitute the following:



3. If failure to stop production after two consecutive moving averages exceed the warning limits occurs, but production does stop at a subsequent time, re-establish a new moving average beginning at the actual production stop point.

Page 6-12, **Sub article 609-5(C) 3**

Delete the first and second sentence in the third full paragraph and substitute the following:

In addition, re-establish the moving averages for all mix properties.

**CONTROL LIMITS**

Page 6-12, **Sub article 609-5(C) 4**

At the bottom of this page, delete the table and substitute the following:

**CONTROL LIMITS**

Mix Control Criteria	Target Source	Warning Limit	Moving Average Limit	Individual Limit
2.36mm Sieve	JMF	±4.0 %	±5.0 %	±8.0 %
0.075mm Sieve	JMF	±1.5 %	±2.0 %	±2.5 %
Binder Content	JMF	±0.3 %	±0.5 %	±0.7 %
VTM @ N <sub>des</sub>	JMF	±1.0 %	±1.5 %	±2.0 %
VMA @ N <sub>des</sub>	Min. Spec. Limit	-0.5%	-0.8%	-1.0%
P <sub>0.075</sub> / P <sub>be</sub> Ratio	Max. Spec. Limit	0.0	N/A	+0.4%
%G <sub>mm</sub> @ N <sub>ini</sub>	Max. Spec. Limit	N/A	N/A	+2.0%
TSR	Min. Spec. Limit	N/A	N/A	-15.0%

Allowable Retesting for Mix Deficiencies:

Page 6-14, **Sub article 609-5C (7)**

In the first paragraph, insert the following as the fourth sentence:

The Contractor under the supervision of the Department's QA personnel will perform these retests.

**FIELD COMPACTION QUALITY CONTROL**

Page 6-15, **Sub article 609-5(D) 1**

In the last sentence of the third paragraph of this sub article, insert the wording “and wedging as shown in the HMA/QMS Manual, “after the wording “temporary pavements”

Delete the first and second sentences in the fourth paragraph and substitute the following:

Base and intermediate mix types (surface mixes not included) utilized for pavement widening of less than 4.0 feet and all mix types used in tapers, irregular areas and intersections (excluding full width travel lanes of uniform thickness), will not be subject to the sampling and testing frequency specified above provided the pavement is compacted using approved equipment and procedures. However, the Engineer may require occasional density sampling and testing to evaluate the compaction process.

Page 6-16, **Sub article 609-5(D) 1**

Delete item number 2 at the top of this page. Item number 3 should be re-numbered as 2 after the specified deletion.

Pavement Samples (Cores)

Page 6-16, **Sub article 609-5(D) (2)**

In the first paragraph, delete the second sentence and insert the following as the last sentence in that paragraph:

The use of a separator medium beneath the layer to be tested is prohibited.

LIMITED PRODUCTION PROCEDURE

Page 6-17, **Sub article 609-5(D) 5**

Delete the first paragraph and substitute the following:

Proceed on limited production when, for the same mix type, one of the following items occurs:

- (1) Two consecutive failing lots, excluding lots representing an individual resurfacing map or portion thereof.
- (2) Three consecutive failing lots, with each lot representing an individual resurfacing map or portion thereof.
- (3) Two consecutive failing nuclear control strips.

Pavement within each construction category (New and Other), as defined in Article 610-13, and pavement placed simultaneously by multiple paving crews will be evaluated independently for limited production purposes.

Delete the first sentence in the last paragraph and substitute the following:

If the Contractor does not operate by the limited production procedures as specified above, the two consecutive failing density lots, three consecutive failing lots with each lot representing an individual resurfacing map or portion thereof, or two consecutive failing nuclear control strips, whichever is applicable, and all mix produced thereafter will be considered unacceptable. Remove this material and replace with material that complies with the Specifications, unless otherwise approved.

## DOCUMENTATION (RECORDS)

Page 6-18, **Sub article 609-5(E)**

Delete the third and fourth sentence in the first full paragraph and substitute the following:

Maintain all QC records, forms and equipment calibrations for a minimum of 3 years from their completion date.

Delete the second full paragraph and substitute the following:

Falsification of test results, documentation of observations, records of inspection, adjustments to the process, discarding of samples and/or test results, or any other deliberate misrepresentation of the facts will result in the revocation of the applicable person's QMS certification. The Engineer will determine acceptability of the mix and/or pavement represented by the falsified results or documentation. If the mix and/or pavement in question are determined to be acceptable, the Engineer may allow the mix to remain in place at no pay for the mix, asphalt binder and other mix components. If the mix and/or pavement represented by the falsified results are determined not to be acceptable, remove and replace with mix, which complies with the Specifications. Payment will be made for the actual quantities of materials required to replace the falsified quantities, not to exceed the original amounts.

## QUALITY ASSURANCE

Page 6-18, **Article 609-6**

In Item 1 under Plant Mix Quality Assurance, substitute "5 percent" for "10 percent".

In Item 2 under Plant Mix Quality Assurance, substitute "sampling and testing procedures" for "tests".

In Item 4 under Plant Mix Quality Assurance, add "for that increment" after the word "sample".

In Item 5 under Plant Mix Quality Assurance, add "at a frequency equal to or greater than 10 percent of the QC sample frequency"; or

Insert the following after Item 5 under Plant Mix Quality Assurance:

6. By any combination of the above.

Delete the paragraph below Plant Mix Quality Assurance, and replace with the following:

The Engineer will conduct assurance tests on both split QC samples taken by the Contractor and verification samples taken by the Department. These samples may be the regular quality control samples or a sample selected by the Engineer from any location in the process or verification samples taken at random by the Department. The frequency will be equal to or greater than 5 percent of that required of the Contractor as stated in Sub article 609-5(C)2. The Engineer may select any or all samples for assurance testing.

In Item 1 under Density Quality Assurance, delete the wording at the end of the sentence “at a frequency equal to or greater than 10 percent of the frequency required of the Contractor”.

In Item 3 under Density Quality Assurance, substitute 5 percent for 10 percent.

Page 6-19, **Article 609-6**

In Item 4 under Density Quality Assurance, add “at a frequency equal to or greater than 10 percent of the QC sample frequency.”

Insert the following after Item 4 under Density Quality Assurance:

5. By periodically directing the recalculation of random numbers for the Quality Control core or nuclear density test locations. The original QC test locations may be tested by QA and evaluated as verification tests.

## LIMITS OF PRECISION

Page 6-19, **Article 609-6**

In the limits of precision table, delete the last three rows and substitute the following:

QA retest of prepared QC Gyratory Compacted

Volumetric Specimens	± 0.015
Retest of QC Core Sample	± 1.2% (% Compaction)
Comparison of QA Core Sample	± 2.0% (% Compaction)
QA Verification Core Sample	± 2.0% (% Compaction)
Nuclear Comparison of QC Test	± 2.0% (% Compaction)
QA Nuclear Verification Test	± 2.0% (% Compaction)

Delete the first paragraph below the Limits of Precision table and insert the following two paragraphs.

The Engineer will immediately investigate the reason for differences if any of the following occur:

1. QA test results of QC split sample does not meet above limits of precision, or
2. QA test results of QC split sample does not meet the individual test control limits or the specification requirements, or
3. QA verification sample test results exceed the allowable retesting tolerances.

If the potential for a pavement failure exists, the Engineer may suspend production, wholly or in part, in accordance with the requirements of Article 108-7 while the investigation is in progress. The Engineer's investigation may include, but not be limited to the following:

1. Joint testing of any remaining split samples
2. Review and observation of the QC technician's sampling and testing procedures,
3. Evaluation and calibration of QC testing equipment, and/or
4. Comparison testing of other retained qualified control samples, and/or additional density core samples.

In the third sentence of the second paragraph below the limits of precision table, insert "or verification test results" after "quality assurance test results".

## ASPHALT CONCRETE PLANT MIX PAVEMENTS – DESCRIPTION

### Page 6-20, **Article 610-1**

Insert the following after the last paragraph:

A high frequency of asphalt plant mix, density, or mix and density deficiencies occurring over an extended duration of time may result in future asphalt, which is represented by mix and/or density test results not in compliance with minimum specification requirements, being excluded from acceptance at an adjusted contract unit price in accordance with Article 105-3. This acceptance process may apply to all asphalt produced and /or placed and may continue until the Engineer determines a history of quality asphalt production and placement is reestablished.

## MATERIALS

### Page 6-21, **Article 610-2**

Delete reference of Anti-strip additive (chemical) to **Article 1020-2** and substitute **Article 1020-8**.

## COMPOSITION OF MIXTURES (MIX DESIGN AND JOB MIX FORMULA)

### Page 6-21, **Sub article 610-3(A)**

At the end of the second paragraph, add the following sentence:

In addition, submit Super pave gyratory compactor printouts for all specimens compacted at  $N_{des}$  and  $N_{max}$  during the mix design process.

Insert the following paragraph after the second paragraph:

For the final surface layer of the specified mix type, use a mix design with an aggregate blend gradation above the maximum density line on the 2.36 mm and larger sieves.

Insert the following at the end of the third paragraph:

When the percent of binder contributed from RAS or a combination of RAS and RAP exceeds 20 percent of the total binder in the completed mix, the virgin binder PG grade shall be one grade below (both high and low temperature grade) the binder grade specified in Table 610-2 for the mix type.

Delete the fourth paragraph and substitute the following:

For Type S 12.5D mixes, the maximum percentage of reclaimed asphalt material is limited to 15% and shall be produced using virgin asphalt binder grade PG 76-22. For all other recycled mix types, when the percentage of RAP is 15 percent or less of the total mixture, the virgin binder PG grade shall be as specified in Table 610-2 for the specified mix type. When the percentage of RAP is greater than 15 but not more than 25 percent of the total mixture, the virgin binder PG grade shall be one grade below (both high and low temperature grade) the specified grade for the mix type. When the percentage of RAP is greater than 25 percent of the total mixture, the Engineer will establish and approve the asphalt binder grade.

Page 6-22, **Sub article 610-3(A)**

Insert the following sentence at the end of the Item 4:

If natural sand is utilized in the proposed mix design, determine and report the Uncompacted Void Content of the natural sand in accordance with AASHTO T-304, Method A.

Page 6-23, **Sub article 610-3(A)**

Under the quantities of mix components insert the following sentence:

When requested by the Engineer, submit to the Department's Materials and Tests Unit, in Raleigh, six (6) Super pave Gyratory Compactor specimens compacted to a height of 75 mm and to a void content (VTM) of 4.0% +/- 0.5% for performance rut testing with the Asphalt Pavement Analyzer.

## JOB MIX FORMULA

Page 6-24, **Sub article 610-3(C)**

Delete Table 610-1 and associated notes. Substitute the following:

**TABLE 610-1**  
**SUPERPAVE AGGREGATE GRADATION DESIGN CRITERIA**

Standard	Percent Passing Criteria (Control Points)											
Sieves	Mix Type (Nominal Maximum Aggregate Size)											
	4.75 mm (a)		9.5 mm (c)		12.5 mm (c)		19.0 mm		25.0 mm		37.5 mm	
(mm)	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
50.0											100.0	
37.5									100.0		90.0	100.0
25.0							100.0		90.0	100.0		90.0
19.0					100.0		90.0	100.0		90.0		
12.5			100.0		90.0	100.0		90.0				
9.5	100.0		90.0	100.0		90.0						
4.75	90.0	100.0		90.0								
2.36	65.0	90.0	32.0(b)	67.0(b)	28.0	58.0	23.0	49.0	19.0	45.0	15.0	41.0
1.18												
0.600												
0.300												
0.150												
0.075	4.0	8.0	4.0	8.0	4.0	8.0	3.0	8.0	3.0	7.0	3.0	6.0

- (a) For Type S 4.75A, a minimum of 50% of the aggregate components shall be manufactured material from the crushing of stone.
- (b) For Type SF 9.5A, the percent passing the 2.36mm sieve shall be a minimum of 60% and a maximum of 70%.
- (c) For the final surface layer of the specified mix type, use a mix design with an aggregate blend gradation above the maximum density line on the 2.36 mm and larger sieves.

Delete Table 610-2 and associated notes. Substitute the following:

**TABLE 610-2****SUPERPAVE MIX DESIGN CRITERIA**

	Design	Binder	Compaction Levels			Volumetric Properties (c)			
Mix	ESALs	PG							
Type	millions	Grade	No. Gyration @			VMA	VTM	VFA	% Gmm
(f)	(a)	(b)	N <sub>ini</sub>	N <sub>des</sub>	N <sub>max</sub>	% Min.	%	Min. Max.	- @ N <sub>ini</sub>
S-4.75A	<0.3	64 -22	6	50	75	20.0	7.0-15.0		
SF-9.5A	<0.3	64 -22	6	50	75	16.0	3.0 - 5.0	70 - 80	≤ 91.5
S-9.5B	0.3 - 3	64 -22	7	75	115	15.0	3.0 - 5.0	65 - 80	≤ 90.5
S-9.5C	3 - 30	70 -22	8	100	160	15.0	3.0 - 5.0	65 - 76	≤ 90.0
S-12.5C	3 - 30	70 -22	8	100	160	14.0	3.0 - 5.0	65 - 75	≤ 90.0
S-12.5D	> 30	76 -22	9	125	205	14.0	3.0 - 5.0	65 - 75	≤ 90.0
I-19.0B	< 3	64 -22	7	75	115	13.0	3.0 - 5.0	65 - 78	≤ 90.5
I-19.0C	3 - 30	64 -22	8	100	160	13.0	3.0 - 5.0	65 - 75	≤ 90.0
I-19.0D	> 30	70 -22	9	125	205	13.0	3.0 - 5.0	65 - 75	≤ 90.0
B-25.0B	< 3	64 -22	7	75	115	12.0	3.0 - 5.0	65 - 78	≤ 90.5
B-25.0C	> 3	64 -22	8	100	160	12.0	3.0 - 5.0	65 - 75	≤ 90.0
B-37.5C	> 3	64 -22	8	100	160	11.0	3.0 - 5.0	63 - 75	≤ 90.0
	<i>Design Parameter</i>					<i>Design Criteria</i>			
All	1. % G <sub>mm</sub> @ N <sub>max</sub>					≤ 98.0% (d)			
Mix	2. Dust to Binder Ratio (P <sub>0.075</sub> / P <sub>be</sub> )					0.6 - 1.4			
Types	3. Retained Tensile Strength (TSR)					85 % Min. (e)			
	(AASHTO T 283 Modified)								

- Notes:**
- (a) Based on 20 year design traffic.
  - (b) When Recycled Mixes are used, select the binder grade to be added in accordance with Sub article 610-3(A).
  - (c) Volumetric Properties based on specimens compacted to N<sub>des</sub> as modified by the Department.
  - (d) Based on specimens compacted to N<sub>max</sub> at selected optimum asphalt content.
  - (e) AASHTO T 283 Modified (No Freeze-Thaw cycle required). TSR for Type S 4.75A, Type B 25.0 and Type B 37.5 mixes is 80% minimum.
  - (f) Mix Design Criteria for Type S 4.75A may be modified subject to the approval of the Engineer



## WEATHER, TEMPERATURE, AND SEASONAL LIMITATIONS FOR PRODUCING AND PLACING ASPHALT MIXTURES

Page 6-26, **Article 610-4, Table 610-3**

Delete the title of **Table 610-3** and substitute the following title:

### **ASPHALT PLACEMENT- MINIMUM TEMPERATURE REQUIREMENTS**

In the first column, third row; delete reference to the ACSC Types S 9.5A and S 12.5B mix.

Add the following minimum placing temperatures for mix types S 4.75A and SF 9.5A.

<b>Asphalt Concrete Mix Type</b>	<b>Minimum Air Temperature</b>	<b>Minimum Road Surface Temperature</b>
ACSC, Type S 4.75A, SF 9.5A	40°F (5°C)	50°F (10°C)

## SPREADING AND FINISHING

Page 6-32, **Article 610-8**

Insert the following after the second sentence within the sixth paragraph.

Take necessary precautions during production, loading of trucks, transportation, truck exchanges with paver, folding of the paver hopper wings, and conveying material in front of the screed to prevent segregation of the asphalt mixtures.

Page 6-32, **Article 610-8**

Delete the last paragraph beginning on this page and continuing on the next page and substitute the following:

Use pavers equipped with an electronic screed control that will automatically control the longitudinal profile and cross slope of the pavement. Control the longitudinal profile through the use of either a mobile grade reference(s), including mechanical, sonic and laser grade sensing and averaging devices, an erected string line(s) when specified, joint matching shoe(s), slope control devices or the approved methods or combination of methods. Unless otherwise specified, use a mobile grade reference system capable of averaging the existing grade or pavement over a minimum 30 foot (9.1 meter) distance or by non-contacting laser or sonar type ski with at least four referencing stations mounted on the paver at a minimum length of 24 feet. Establish the position of the reference system such that the average profile grade is established at the approximate midpoint of the system. The transverse cross-slope shall be controlled as directed by the Engineer.

Delete the second full paragraph on this page and substitute the following:

Use the 30 foot (9.1 meter) minimum length mobile grade reference system or the non-contacting laser or sonar type ski with at least four referencing stations mounted on the paver at a minimum length of 24 feet to control the longitudinal profile when placing the initial lanes and all adjacent lanes of all courses, including resurfacing and asphalt in-lays, unless other specified or approved. A joint matching device short (6 inch [152.4 mm] shoes) may be used only when approved.

At the end of the third full paragraph, add the following sentence:

Waiver of the use of automatic screed controls does not relieve the Contractor of achieving plan grades and cross-slopes.

Insert the following as the last paragraph:

Repair any damage caused by hauling equipment across structures at no additional cost to the Department.

#### DENSITY REQUIREMENTS

Delete **Table 610-4** and substitute the following table and associated notes:

**Table 610-4**  
**MINIMUM DENSITY REQUIREMENTS**

MIX TYPE	MINIMUM % of G <sub>mm</sub>
SUPERPAVE MIXES	(Maximum Specific Gravity)
S 4.75A	85.0 <sup>(a,b)</sup>
SF 9.5A	90.0
S 9.5X, S 12.5X, I 19.0X, B 25.0X, B 37.5X	92.0

(a) All S 4.75A pavement will be accepted for density in accordance with Article 105-3

(b) Compaction to the above specified density will be required when the S 4.75 A mix is applied at a rate of 100 lbs/sy (55 kg/m<sup>2</sup>)

Delete the second paragraph and substitute the following:

Compact base and intermediate mix types (surface mixes not included) utilized for pavement widening of less than 4.0 feet (1.2 meters) and all mix types used in tapers, irregular areas and intersections (excluding full width travel lanes of uniform thickness), using equipment and procedures appropriate for the pavement area width and/or shape. Compaction with equipment other than conventional steel drum rollers may be necessary to achieve adequate compaction. Occasional density sampling and testing to evaluate the compaction process may be required. Densities lower than that specified in Table 610-4 will be accepted, in accordance with Article 105-3, for the specific mix types and areas listed directly above.

#### **SURFACE REQUIREMENTS AND ACCEPTANCE**

Delete the first paragraph and substitute the following:

Construct pavements using quality paving practices as detailed herein. Construct the pavement surface smooth and true to the plan grade and cross slope. Immediately correct any defective areas with satisfactory material compacted to conform with the surrounding area. Pavement imperfections resulting from unsatisfactory workmanship such as segregation, improper longitudinal joint placement or alignment, non-uniform edge alignment and excessive pavement repairs will be considered unsatisfactory and if allowed to remain in place will be accepted in accordance with Article 105-3.

When directed due to unsatisfactory lay down or workmanship, operate under the limited production procedures. Limited production for unsatisfactory lay down is defined as being restricted to the production, placement, compaction, and final surface testing (if applicable) of a sufficient quantity of mix necessary to construct only 2500 feet (750 meter) of pavement at the lay down width.

Remain on limited production until such time as satisfactory lay down results are obtained or until three consecutive 2500 foot (750 meter) sections have been attempted without achieving satisfactory lay down results. If the Contractor fails to achieve satisfactory lay down results after three consecutive 2500 foot (750 meter) sections have been attempted, cease production of that mix type until such time as the cause of the unsatisfactory lay down results can be determined. As an exception, the Engineer may grant approval to produce a different mix design of the same mix type if the cause is related to mix problem(s) rather than lay down procedures.

Mix placed under the limited production procedures for unsatisfactory lay down or workmanship will be evaluated for acceptance in accordance with Article 105-3.

## DENSITY ACCEPTANCE

### Page 6-36, **Article 610-13**

Delete the second paragraph and substitute the following:

The pavement will be accepted for density on a lot by lot basis. A lot will consist of one day's production of a given job mix formula on a contract. As an exception, separate lots will be established when the one of the following occurs:

- (1) Portions of pavement are placed in both "New" and "Other" construction categories as defined below. A lot will be established for the portion of the pavement in the "New" construction category and a separate lot for the portion of pavement in the "Other" construction category.
- (2) Pavement is placed on multiple resurfacing maps, unless otherwise approved prior to paving. A lot will be established for each individual resurfacing map or portion thereof.
- (3) Pavement is placed by multiple paving crews. A lot will be established for the pavement placed by each paving crew.
- (4) Pavement is placed in different layers. A lot will be established for each layer.
- (5) Control strips are placed during limited production.

The Engineer will determine the final category and quantity of each lot for acceptance purposes.

### Page 6-36, **Article 610-13**

Delete the first sentence in the third paragraph and insert the following:

The "New" construction category will be defined as pavements of uniform thickness, exclusive of irregular areas, meeting all three of the following criteria:

Delete the sixth paragraph and substitute the following:

A failing lot for density acceptance purposes is defined as a lot for which the average of all test sections, and portions thereof, fails to meet the minimum specification requirement. If additional density sampling and testing, beyond the minimum requirement, is performed and additional test sections are thereby created, then all test results shall be included in the lot average. In addition, any lot or portion of a lot that is obviously unacceptable will be rejected for use in the work.

Page 6-36, **Article 610-13**

Delete the last paragraph and substitute the following:

Any density lot not meeting minimum density requirements detailed in Table 610-4 will be evaluated for acceptance by the Engineer. If the lot is determined to be reasonably acceptable, the mix will be paid at an adjusted contract price in accordance with Article 105-3. If the lot is determined not to be acceptable, the mix will be removed and replaced with mix meeting and compacted to the requirement of these specifications.

**BASIS OF PAYMENT, ASPHALT PAVEMENTS**

Page 6-37, **Article 610-16**

Add the following to the second paragraph:

The quantity of hot mix asphalt pavement, measured as provided in Article 610-15, will be paid for at the contract unit prices per ton (metric ton) for “Asphalt Concrete Surface Course, Type S 4.75A, and SF 9.5A”.

Add the following to the payment item description:

Asphalt Concrete Surface Course, Type S 4.75A ..... Ton (Metric Ton)  
Asphalt Concrete Surface Course, Type SF 9.5A ..... Ton (Metric Ton)

Delete reference to the Asphalt Concrete Surface Course, Types S 9.5A and S 12.5B in both the second paragraph and in the payment description.

**ASPHALT BINDER FOR PLANT MIX - METHOD OF MEASUREMENT**

Page 6-39, **Article 620-4**

Delete the first sentence of the second paragraph and substitute the following:

Where recycled plant mix is being produced, the grade of asphalt binder to be paid for will be the grade for the specified mix type as required in Table 610-2 unless otherwise approved.

**OPEN-GRADED ASPHALT FRICTION COURSE CONSTRUCTION REQUIREMENTS**

Page 6-43, **Article 650-5**

Add the following paragraph after the first paragraph:

Do not place open-graded asphalt friction course between October 31 and April 1 of the next year, unless otherwise approved. Place friction course, Type FC-1 mixes, only when the road surface temperature is 50°F (10°C) or higher and the air temperature is 50°F (10°C) or higher. The minimum air temperature for Type FC-1 Modified and FC-2 Modified mixes will be 60°F (15°C).

## AGGREGATES FOR ASPHALT PLANT MIXES

Page 10-34, **Sub article 1012-1(B) 4**

Delete and substitute the following:

(4) Flat and Elongated Pieces:

Use coarse aggregate meeting the requirements of Table 1012-1 for flat and elongated pieces when tested in accordance with ASTM D 4791 (Section 8.4) on the No. 4 (4.75 mm) sieve and larger with a 5:1 aspect ratio (maximum to minimum) for all pavement types, except there is no requirement for Types S 4.75A, SF 9.5A, and S 9.5B.

Page 10-35, **Table 1012-1**

Delete **Table 1012-1** and substitute the following:

**Table 1012-1**

### **AGGREGATE CONSENSUS PROPERTIES<sup>(a)</sup>**

Mix Type	Course	Fine	Sand	Flat &
	Aggregate	Aggregate	Equivalent	Elongated
	Angularity <sup>(b)</sup>	Angularity		5 : 1 Ratio
		% Minimum	% Minimum	% Maximum
	ASTM D 5821	AASHTO T 304 Method A	AASHTO T 176	ASTM D 4791 Section 8.4
S 4.75 A		40	40	
SF 9.5 A	75 / -	40	40	10 <sup>(c)</sup>
S 9.5 B				
I 19.0 B				
B 25.0 B				
S 9.5 C	95 / 90	45	45	10
S 12.5 C				
I 19.0 C				
B 25.0 C				
B 37.5 C	100 / 100	45	50	10
S 12.5 D				
I 19.0 D	100 / 100	45	50	10
OGAFC	100 / 100	N/A	N/A	10

(a) Requirements apply to the course aggregate blend and/or fine aggregate blend

(b) 95/90 denotes that 95% of the course aggregate (+No.4 or + 4.75mm sieve) has one fractured face and 90% has two or more fractured faces.

(c) Does not apply to Mix Types SF 9.5 A or S 9.5 B

Page 10-36, **Sub article 1012-1(C)1**

Insert the following after the fourth paragraph:

When natural sand is utilized in “C” or “D” level asphalt mixes, do not exceed the maximum natural sand percentage in the mix design and/or production aggregate blend detailed in Table 1012-1A.

**Table 1012-1A**

Uncompacted Void Content of Fine Aggregate AASHTO T 304 Method A	Maximum Percent Natural Sand Included in Mix Design and/or Production*
Less than 42.0	10
Equal to 42.0 to 44.9	15
Equal to 45.0 and greater	20

\*Maximum percent natural sand may be exceeded with approval from Pavement Construction Engineer upon satisfactory evaluation of pavement performance testing

#### FINE AGGREGATE ANGULARITY

Page 10-36, **Sub article 1012-1(C)6**

Delete reference to AASHTO TP 33 Method A and substitute AASHTO T 304, Method A.

Page 10-37, **Sub article 1012-1(H)**

Delete this Sub article. It is a duplicate of Sub article 1012-1(F) located on Page 10-36.

#### ASPHALT BINDER

Page 10-46, **Article 1020-2**

Delete the first paragraph and substitute the following:

Use Performance Graded Asphalt Binder meeting the requirements of AASHTO M 320. See Article 610-3 for the specified grades. Submit a Quality Control Plan for asphalt binder production in conformance with the requirements of AASHTO R 26 to the Materials and Tests Unit.

RR31

#### **TRAFFIC CONTROL:**

09-16-03

Maintain traffic in accordance with Divisions 11 and 12 of the North Carolina Department of Transportation January 2002 Standard Specifications for Roads and Structures, and the following provisions:

Use a lane closure (refer to North Carolina Department of Transportation January 2002 Highway Design Branch Roadway Standard Drawings Nos. 1101.02, 1101.11, 1110.02, Detail for 1130D01

and details for the Advance Work Zone signing in contract) or a slow-moving operation as shown in details of this contract. Use a moving operation only if the minimum speed maintained at all times is 3 mph with no stops that narrow or close a lane of travel. If the moving operation is progressing slower than 3 mph at any time, install a lane closure. Maintain the existing traffic pattern at all times, except in the immediate work zone where lane closures are allowed as determined by the Engineer.

Refer to North Carolina Department of Transportation January 2002 Highway Design Branch Roadway Standard Drawings Nos. 1101.02, 1101.03, 1101.04, 1101.05, 1101.07, 1101.11, 1110.01, 1110.02, 1115.01, 1135.01, 1145.01, 1150.01, 1165.01 and 1170.01 when closing a lane of travel in a stationary work zone such as pavement patching resurfacing, or pavement marking removal, etc. Properly ballasted cones may be used instead of drums for lane closures during daylight hours. The stationary work zone shall be a maximum of 3 miles in length at any given time unless otherwise directed by the Engineer. A "pilot vehicle" operation may be used in conjunction with flaggers and the appropriate pilot vehicle warning signing as directed by the Engineer. During periods of construction inactivity, return the traffic pattern to the existing alignment and remove or cover any work zone signs. When covering work zone signs, use an opaque material that prevents reading of the sign at night by a driver using high beam headlights. Use material, which does not damage the sign sheeting. Replace any obliterated markings as required by other sections of the Specifications and the Engineer.

When personnel and/or equipment are working on the shoulder adjacent to an undivided facility and within 5 feet of an open travel lane, close the nearest open travel lane using Roadway Standard Drawing No. 1101.02 unless the work area is protected by barrier or guardrail. When personnel and/or equipment are working on the shoulder, adjacent to a divided facility and within 10 feet of an open travel lane, close the nearest open travel lane using Roadway Standard Drawing No. 1101.02 unless the work area is protected by barrier or guardrail. When personnel and/or equipment are working within a lane of travel of an undivided or divided facility, close the lane according to the traffic control plans, roadway standard drawings or as directed by the Engineer. Conduct the work so that all personnel and/or equipment remain within the closed travel lane. Do not work simultaneously, on both sides of an open travel way, within the same location, on a two-lane, two-way road. Do not perform work involving heavy equipment within 15 feet of the edge of travel way when work is being performed behind a lane closure on the opposite side of the travel way.

The maximum acceptable difference in elevation between open lanes of travel is 1.5 inches. The maximum acceptable edge of pavement drop-off is 2 inches. Backfill at a 6:1 slope up to the edge and elevation of existing pavement in areas adjacent to an open travel lane if the drop-off exceeds 2 inches at no expense to the Department.

When utilizing a slow-moving operation for such items as pavement marking placement, pavement marker installation and pesticide spraying, the slow moving operation caravan shall consist, as a minimum, of the vehicles and devices shown on the Moving Operation Caravan Detail(s) herein. Traffic cones may be used when necessary to provide additional protection of wet pavement markings. Ballast all traffic cones so they will not be blown over by traffic.



Notify the Engineer forty-eight (48) hours before milling or resurfacing will interfere with the existing Signal Loops. Loops may need to be placed in milled surface before resurfacing occurs. Coordinate all signal loop operations with the Engineer.

Notify the Engineer fifteen (15) days before resurfacing a bridge. Patch and make repairs to bridge surface before resurfacing occurs. Coordinate bridge resurfacing operations with the Engineer.

Notify the Engineer forty-eight (48) hours before resurfacing the areas of existing pavement that require patching. Patch these areas before resurfacing occurs. Coordinate the resurfacing operations of the patched areas with the Engineer

During a resurfacing only operation, bring all newly resurfaced lanes to the same elevation within 72 hours.

For partial or “wheel track” milling operations on two-way, two-lane facilities, mill and pave back by the end of each work day. For partial or “wheel track” milling operations on multi-lane facilities, the lane being milled may be left closed and paved back within 72 hours.

The following options are acceptable during Resurfacing/milling operations on two-way, two-lane facilities when the entire roadway or entire lane is to be milled:

- 1) Mill a single lane and pave back by the end of each work day
- 2) Mill the entire width of roadway and pave back within 72 hours

The following options are available during Resurfacing/milling operations on multi-lane facilities when all lanes or a single lane in one direction are to be milled:

- 1) Mill the entire width of pavement for all lanes to be milled in any given direction daily and pave back within 72 hours.
- 2) Mill a single lane and pave back by the end of each work day
- 3) Mill a single lane, leave a lane closure in and pave back within 72 hours.

Slope the pavement at the beginning and ending of the daily milling operation as directed by the Engineer. Sweep and remove all milled material from the roadway as soon as the daily milling operation is completed. Maintain all accesses where milling is conducted using suitable backfill material approved by the Engineer. Continue milling operations until the particular section of roadway being milled is complete.

Operate equipment and conduct operations in the same direction as the flow of traffic. Do not cross medians with equipment, except at properly designated interchanges.

Review and record the existing pavement markings and markers prior to resurfacing. Use the record of existing pavement markings and markers in conjunction with North Carolina Department of Transportation January 2002 Highway Design Branch Roadway Standard Drawings to re-establish the proposed pavement markings and markers unless otherwise directed by the Engineer.

Provide appropriate lighting in accordance with Section 1413 of the North Carolina Department of Transportation January 2002 Standard Specifications for Roads and Structures when electing to perform paving at night at no expense to the Department.

Remove existing pavement markers in preparation for paving. Repair any pavement damage due to existing pavement marker removal before resurfacing. Dispose of existing pavement markers as directed by the Engineer.

No direct payment will be made for the signing and traffic control items including Truck Mounted Impact Attenuators (TMIA – see Section 1165 of the NCDOT January 2002 Standard Specifications for Roads and Structures and January 2002 Highway Design Branch Roadway Standard Drawings). This work will be considered incidental to the various other bid items in the Contract.

***NOTE: Measurement and payment for all work related to traffic control, signage, and maintenance of traffic is to be paid for in the bid item included on the bid schedule for this work. Payment will be made in equal monthly installments over the life of the contract.***

## **TRAFFIC CONTROL**

**01-18-05**  
Rev. 06/21/05

Revise the 2002 *Standard Specifications* as follows:

### **WORK ZONE SIGNS**

Article 1089-1(A) General is deleted. Substitute the following:

(A) General:

Rigid sign retro reflective sheeting requirements for Types VII, VIII and IX (prismatic) fluorescent are described in Tables 1089-A, 1089-B and 1089-C. Cover the entire sign face of the sign substrate with NCDOT approved Type VII, VIII or IX (prismatic) fluorescent orange reflective sheeting. Apply the reflective sheeting in a workmanlike manner so that there are no bubbles or wrinkles in the material.

Roll-up sign retro reflective requirements are described in Table 1089-D.

#### **1. Work Zones Signs (Stationary)**

Use Type VII, VIII or IX (prismatic) fluorescent orange retro reflective sheeting that meets the following reflective requirements in Tables 1089-A, 1089-B or 1089-C respectively. Use approved composite or aluminum for sign backing. Signs and sign supports must meet or exceed NCHRP 350 requirements for Breakaway Devices.

<b>Table 1089-A</b> Minimum Coefficient of Retro reflection $R_A$ for TYPE VII Fluorescent Orange Sheeting (Candelas per lux per square meter)
---

Observation Angle	Entrance Angle	
	-4°	30°
0.1°	300	170
0.2°	230	130
0.5°	72	41

**Table 1089-B**

Minimum Coefficient of Retro reflection  $R_A$  for  
TYPE VIII Fluorescent Orange Sheeting  
(Candelas per lux per square meter)

Observation Angle	Entrance Angle	
	-4°	30°
0.1°	300	135
0.2°	210	95
0.5°	75	35

**Table 1089-C**

Minimum Coefficient of Retro reflection  $R_A$  for  
TYPE IX Fluorescent Orange Sheeting  
(Candelas per lux per square meter)

Observation Angle	Entrance Angle	
	-4°	30°
0.1°	200	110
0.2°	115	65
0.5°	72	41
1.0°	24	14

## 2. Work Zones Signs (Barricade Mounted)

Use approved composite or roll-up signs for barricade mounted sign substrates. Approved composite barricade mounted warning signs (black on orange) must be Type VII, VIII or IX sheeting which meet the retro reflective requirements of Table 1089-A, 1089-B or 1089-C. Roll-up mounted barricade warning signs (black on orange) must meet the retro reflective requirements in Table 1089-D. Sign and barricade assembly must meet or exceed the requirements of NCHRP 350 for Work Zone Category II Devices.

## 3. Work Zones Signs (Portable)

Use approved composite or roll-up sign substrates on portable sign stands.

Composite - Use Type VII, VIII or IX (prismatic) fluorescent orange retro reflective sheeting that meets the following reflective requirements in Tables 1089-A, 1089-B or 1089-C. Signs and sign supports must meet or exceed NCHRP 350 requirements for Breakaway Devices.

Roll-up Signs - Use fluorescent orange retro reflective roll-up signs that meet the following reflective requirements:

<b>Table 1089-D</b> Minimum Coefficient of Retro reflection $R_A$ for Fluorescent Orange Roll-Up Signs (Candelas per lux per square meter)		
Observation Angle	Entrance Angle	
	-4°	30°
0.1°	300	120
0.2°	200	80
0.5°	90	34

Use roll up signs that have a minimum 3/16" x 1 1/4" horizontal rib and 38" x 1 1/4" vertical rib and has been crash test to meet NCHRP 350 requirements and Traffic Control qualified by the Work Zone Traffic Control Unit.

Add the following after 1089-1(C):

(D) Warranty

Warranty requirements for rigid sign retro reflective sheeting Types VII, VIII and IX are described in Sub article 1093-2(F). Such sheeting shall maintain 80% (Table 1093-10) of its retro reflectivity as shown in Tables 1089 A, B. and C.

Roll-up fluorescent orange retro reflective signs shall maintain 80% of its retroreflectivity (Table 1089-D) for years 1 – 2 and 50% for year 3.

Rigid and Rollup Fluorescent orange signs shall maintain a Fluorescence Luminance Factor ( $Y_F$ )\* of 13% for three (3) years.

\*Fluorescence Testing Method is described in ASTM E2301 Test Methods for Fluorescent Retro reflective Sheeting.

Rigid and Roll up fluorescent orange signs shall maintain a total Luminance Factor (Y) of 25 for three (3) years and conform to the requirements of Table 1089-E when measured in accordance with ASTM D4956.

**Table 1089-E**

Fluorescent Orange colorimetric requirements

Color	1		2		3		4	
	x	y	x	y	x	y	x	Y
Fluorescent Orange	0.583	0.416	0.535	0.400	0.595	0.351	0.645	0.355

**BARRICADES**

**Article 1089-3(A) General**, delete both paragraphs and substitute the following:

Type III Barricades shall be constructed of perforated square steel tubing and/or angle iron. Provide Type III barricades that use a cross member or stabilization bar and meet the requirements of NCHRP 350 for Work Zone Category II Devices with composite and roll-up signs attached.

Use approved composite or plastic barricade rails that have a smooth face and have alternating orange and white retro reflective stripes that slope at an angle of 45 degrees.

**Article 1089-3(C) Reflective Sheeting**, delete the first paragraph only and substitute the following:

Use Type VII, VIII or IX (prismatic) retro reflective fluorescent orange sheeting on both sides of the barricade rails. The rail sheeting retro reflectivity values shall meet the retro reflectivity requirements in Table 1089-A, 1089-B or 1089-C and shall be listed on the Department's approved product list or accepted as traffic qualified by the Traffic Control Unit.

SP10R30

**NOTE:** *Measurement and payment for all work related to traffic control, signage, and maintenance of traffic is to be paid for in the bid item included on the bid schedule for this work. Payment will be made in equal monthly installments over the life of the contract.*

## **SUPPLEMENTAL CONDITIONS**

These Supplemental Conditions amend the City of Durham Standard Specifications as indicated below. All provisions which are not amended remain in effect.

1. Amendments to the City of Durham Water and Sewer Construction Specifications, dated September, 1994.

Replace in its entirety paragraph 17 concerning Public Convenience and Safety, subparagraph A, entitled "Contractor's Responsibility" on page 2-10 with the following:

### **17. PUBLIC CONVENIENCE AND SAFETY**

#### **A. CONTRACTOR'S RESPONSIBILITY:**

The Contractor will handle the construction work in such a manner as to maintain traffic on the main roads along the construction area and will provide and maintain such warning signs and barricades as may be necessary to protect the work and the public in their use of the highway itself, and in no case will the City of Durham be responsible for any failure of the Contractor to provide such warnings and precautions. The Contractor shall protect, indemnify, and save harmless the City of Durham from any and all claims, expenses, or damages which might be incurred as a result of accidents. All signs and barricades shall meet the minimum requirements of and conform to the standard outline in the manual entitled "Manual on Uniform Traffic Control Devices for Streets and Highways Millennium Edition", published by the United States Department of Transportation, Federal Highway Administration, 2000. Representatives of the Department of Transportation and Highway Safety will be called upon to inspect this work and their suggestions regarding the safety precautions must be followed.

Replace in its entirety paragraph 18 concerning Accident Prevention, subparagraph A, on page 2-11 with the following:

### **18. ACCIDENT PREVENTION**

A. The Contractor shall be solely responsible for all safety precautions required to complete the work. The Contractor shall exercise proper precaution at all times for the protection of persons and property and shall be responsible for all damages to persons or property, either on or off the site, which occur as a result of his prosecution of the work. The safety provisions of applicable laws and building and construction codes shall be observed. Machinery, equipment and all hazards shall be guarded in accordance with the safety provisions of the "Manual of Accident Prevention in Construction" published by the Associated General Contractors of America, Inc., to the extent that such provisions are not in conflict with applicable local laws. The Contractor shall remain responsible for the safety and protection of the work until the work is completed and accepted by the City.

Replace in its entirety paragraph 31 concerning Sheeting and Bracing on page 2-24 with the following:

### 31. SHEETING AND BRACING

All sheeting and bracing shall be done in accordance with the latest applicable "OSHA" Specifications. These minimum standards shall be closely followed. (Federal Register, OSHA Subpart P, 1926.650, 1926.651, 1926.652, 1926.653.) The Contractor or others shall furnish, install and maintain such sheeting, bracing, etc., as may be required to support the sides and/or roof of any excavation to prevent any movement which might injure persons, damage property, or structures, and injure or delay the work.

#### 2. Amendments to the City of Durham Street Construction Specifications dated March, 1991.

- a. Revise paragraph 9, Sampling and Testing of Materials and Construction as follows. This revision removes the financial and quality control responsibility of testing from the City and places this responsibility on the Contractor:

The Contractor is to comply with material submittal and approval requirements as outlined elsewhere in these specifications. The Contractor is responsible for performing the required control testing for this project to demonstrate compliance with contract requirements as outlined in these specifications or with specifications incorporated into this contract by reference. The City may perform, or cause to be performed by independent laboratory services, quality assurance testing of the testing that will be performed by the contractor.

- b. Replace in its entirety paragraph 14B concerning Accident Prevention on page 8 with the following:

#### 14. ACCIDENT PREVENTION

- B. The Contractor shall be solely responsible for all safety precautions required to complete the work. The Contractor shall exercise proper precaution at all times for the protection of persons and property and shall be responsible for all damages to persons or property, either on or off the site, which occur as a result of his prosecution of the work. The safety provisions of applicable laws and building and construction codes shall be observed. Machinery, equipment and all hazards shall be guarded in accordance with the safety provisions of the "Manual of Accident Prevention in Construction" published by the Associated General Contractors of America, Inc., to the extent that such provisions are not in conflict with applicable local laws. The Contractor shall remain responsible for the safety and protection of the work until the work is completed and accepted by the City.

- c. Replace in its entirety the section 1 concerning Mobilization and Payment on page 23 with the following:

1. MOBILIZATION, PROGRESS SCHEDULE AND DE-MOBILIZATION: The total cost bid for mobilization, schedule and de-mobilization is not to exceed ten (10) percent of the total contract bid. All costs for mobilization and de-mobilization shall be included in the Contract unit price. There shall be no additional compensation for mobilization

and no adjustments to the unit prices based on changes in the scope of work, including, but not limited to, any additions to the work on the contract. The contractor will be paid in increments based on the status of the actual mobilization effort. An amount equal to fifteen (15) percent of the total mobilization cost shall be withheld until the physical completion of the project and completion of punch-list items and removal of all equipment and temporary construction for project de-mobilization is complete. An amount equal to twenty (20) percent of the total mobilization cost shall be withheld for payment of the progress schedule development and monthly updates as outlined in this contract. The breakdown of this bid item is as follows:

- Mobilization – Installments to reflect - A Total of 65%
  - Schedule Submission and updates – A Total of 20%
  - De-mobilization and completion of punch list – A Total of 15%
- 100%

Any amount that the contractor has bid in excess of the amounts noted above will be retained by the City and paid on the final payment estimate.



**CONTRACT**  
**for**  
**CONSTRUCTION OF CONTRACT ST-226**  
**STREET REPAIRS AND RESURFACING**

The Contractor:	_____
The Project:	<u><b>Contract ST-226</b></u>
Number of Days for Completion:	<u><b>210 Calendar Days from Notice to Proceed</b></u>
Daily Liquidated Damages:	<u><b>\$400</b></u>

THIS Construction Contract is made and entered into by and between the City of Durham, a North Carolina municipal corporation (the City) and \_\_\_\_\_(the Contractor).

**SECTION 1 - AGREEMENT.** The Contractor, for and in consideration of the payments and agreements to be made and performed by the City, and hereto annexed, agrees with the City at Contractor's own proper cost and expense, and with skill and diligence, to do the Work. "Work" (with an initial capital letter) means all the construction and services, including all labor, materials, equipment, services, water, heat, utilities, transportation, and other facilities provided or to be provided by the Contractor, to fulfill the Contractor's obligations, including its obligation to construct and complete ready for use **Street Repairs and Resurfacing** as herein set forth, in accordance with this Contract, including such plans and detailed directions, drawings, etc., as the Engineer gives from time to time pursuant to the Engineer's authority under this Contract.

**SECTION 2 - CONTRACT PRICE.** And the Contractor agrees to receive the prices stated in the proposal in full compensation for performing the Work; the Contractor for said consideration shall be responsible for all loss or damage arising out of the nature of the Work or from any action of the elements, for all expenses incurred by or in consequence or the suspension or discontinuance of said Work and for well and faithfully completing the Work.

**SECTION 3 - DEFINITIONS.** Unless the context otherwise requires the following words in this Contract they shall refer as follows: Engineer shall mean Director of Public Works, or authorized assistants acting within the scope of the Director's actual authority. The word "include" in all its forms (included, including, etc.) is to be read as incorporating the expression "but not limited to". "Work" is defined in Section 1 above.

**SECTION 4 - UNIT QUANTITIES.** (a) It is hereby agreed that the preliminary measurements and estimated quantities are not necessarily correct and that payments to be received by the Contractor shall be the actual quantities developed by construction of the Work at the unit prices contained in this Contract or as otherwise provided. (b) If any specifications or estimates are erroneous that were in the information made available to the Contractor by the City, and the error was caused by professional opinion provided to the City by an independent engineer or engineering firm ("independent" meaning that the engineer is not an employee of the City), then the Contractor shall make no claim against the City or its employees, officers, or officials for any damage or loss

suffered by the Contractor in reliance on those specifications or estimates, except nothing in this Section is intended to limit the Contractor's rights under Section 4(a) or Sections 5, 6, or 7.

**SECTION 5 - CONTRACT EXTENSIONS.** The City reserves the right to extend the Contract upon the same terms and at the same unit prices provided that such extensions shall not exceed in cost fifty per cent (50%) of the original Contract price. Such extensions of Work may be at any point where extensions to the project are authorized by agreement of both parties. Such extensions will automatically extend the time of completion in proportion to the dollar value.

**SECTION 6 - CONTRACT CHANGES -**

- A. The Department may make changes, at any time, by written notice, within the general scope of this contract in any one or more of the following: (1) description of the work to be performed, (2) method and manner of performance, and (3) the amount of work to be furnished. If any such change causes a difference in the price, or the time required for performance, an equitable adjustment shall be made in the price and/or delivery schedule and other affected provisions. Such adjustment shall be made by written modification to this contract, signed by both parties. The Contractor must assert any request for equitable adjustment to the contract price, performance schedule, or both, in writing no later than 10 days from the Contractor's first knowledge of the change, or its right to assert such request for equitable adjustment shall be considered waived. Under no circumstance shall any pending request for equitable adjustment or dispute excuse the Contractor from proceeding with its performance, as changed, although the Department in its sole discretion may receive and act upon any request for equitable adjustment at any time before final payment. Failure to agree to any adjustment shall be settled in accordance with paragraph, Disputes, of these Terms and Condition.
- B. The Department's normal procedure for making a change in the contract will be to issue a Request for Change Proposal (RFCP). This is a formal request for the contractor to forward detailed price breakdown information for the proposed change to the contract for the Department's review prior to making the change. There is no separate payment provided for such cost proposals as they are considered the normal course of doing business. Should the contractor's proposal be accepted, a formal modification to the contract will be issue and the contractor shall proceed with the work as outlined.
- C. Immediate changes to the contract may be made by either the issuance of a Request for Change Proposal with a Notice to Proceed (RFCP w/NTP) with the changes or a Change Order Directive (COD). A Change Order Directive will normally be used in an instance where an immediate action is required in advance of the establishment of a descriptive request for proposal. These documents require the contractor to immediately begin work on the changes as outlined therein. The above documents are used to make immediate changes to the contract in advance of an agreement on the equitable adjustment in an effort to minimize disruption in the workflow of the project. Definitization or finalization of the scope of work and settlement of an equitable adjustment to the contract will be accomplished later by the issuance of a modification to the contract.

**SECTION 7 - MODIFICATION AND PRICE PROPOSALS –**

- A. The Contractor shall submit itemized price proposals including those for all subcontractors and sub-tiers for any Department Request for Change Proposal (RFCP) or a Request for

Change Proposal with a Notice to Proceed (RFCP w/NTP) or Change Order Directive (COD) for an equitable adjustment in accordance with this term. The proposal shall include a detailed breakdown of all labor, equipment, materials, supplies, overhead and profit costs for both the contractor and all subcontractors at any tier to allow the Department a review of the proposal. Material, Labor, Equipment and Other Direct Cost shall be summarized and totaled as Construction Direct Costs in the proposal. Overhead, Profit, and Bond shall be added as appropriate line items shown as Indirect Cost in the proposal. Cost estimates or pricing detail backup shall be completely itemized to include Direct Labor man-hours, individual craft, and hourly wage rate. Include verifiable labor burden (including craft fringes, FUI, SUI, and FICA) as a separate line item. Such proposal shall also include a detailed justification for any time extension request that is being requested as part of the equitable adjustment. The contractor is advised that any request in contract period must demonstrate that there has been an increase in the critical path for completion of the project that is directly attributed to the change.

- B. The Contractor's price proposal shall be submitted within 10 days, or as otherwise directed by the Department, of the Contractor's first knowledge of the proposed change or receipt of the Request for Change Proposal (RFCP) or Request for Change Proposal w/Notice to Proceed (RFCP w/NTP).
- C. Lump sum cost estimates or price proposals shall be rejected and returned to the Contractor for itemization as described above. Failure of the Contractor to submit properly itemized cost estimates or price proposals shall not constitute an excusable delay and may result in the Department issuing a Request for Change Proposal w/Notice to Proceed (RFCP w/NTP) or a Change Order Directive (COD) modification to perform the change.
- D. The equitable adjustment shall not include increased costs or time extension for delay resulting from the Contractor's failure to provide notice or to diligently continue performance. No proposal from the Contractor for an equitable adjustment shall be allowed if not asserted within time frames in this clause.

**SECTION 8 – DISPUTES** –The Contractor agrees to make good-faith efforts to settle any dispute or claim that may arise under this contract through discussion and negotiation. A claim, as used in this clause, means a written demand or assertion by either of the contracting parties that seek, as a matter of right, the payment of money in certain sum, the adjustment or interpretation of contract terms, the adjustment of contract period of performance, or other relief arising under or relating to the contract. A written demand or assertion by the Contractor seeking payment of money is not considered a claim until such request has been certified by the Contractor. A demand or assertion or other routine request for payment for an item that is not in dispute when submitted is not considered a claim under this contract. The submission of such a demand or assertion may be converted to a claim by complying with the certification requirements of this clause. An issue in dispute is not converted into a claim unless it is certified as noted below.

- A. Certification of a claim shall be made in writing and shall contain the following statement: "I certify that this claim is made in good faith, that the supporting information is accurate and complete to the best of my knowledge and belief, that the amount requested accurately reflects the contract adjustment for which I believe the City is liable, and that I am duly authorized to certify this claim on behalf of the contractor". The City shall respond to the Contractor's claim in writing within 60 days of the request or shall notify the Contractor of a

date in which a response will be provided. The decision of the City shall be final unless the Contractor files suit against the City.

- b. If a claim is filed by either party, the contracting parties may agree, by mutual consent, to consider the use of Alternative Disputes Resolution (ADR) procedures to resolve the dispute. In the event non-binding mediation or arbitration is agreed upon, the site of the proceedings shall be as agreed by the parties. The mediator or arbitrator shall allocate cost, except that there shall be no pre-decisional interest costs, and each party shall bear its discretionary costs. In the event that ADR fails or is not used, the parties agree the appropriate forum for resolution shall be the court system.
- c. There shall be no interruption in the performance of work, and the Contractor shall proceed diligently with performance of this contract, pending final resolution of any dispute arising under this contract between the parties hereto or between the Contractor and its lower-tier Subcontractors, and shall comply with any decision that is made by the City in responding to the Contractor's claim.

SECTION 9 - ADDITIONAL WORK AND/OR MATERIALS. The City, acting through the Engineer may require the Contractor to do additional Work which does not appear in the Proposal at fixed unit prices but which may be found necessary to complete the proper prosecution and completion of the Work. Payment will be made based upon the extra work item found in the General Specification Section of this Contract. No materials shall be furnished other than those included in the Contract for which unit prices are stated, except upon written order of the Engineer given prior to the beginning of performance of such furnishing of such materials. No Work shall be done (except as provided in the preceding sentence), except upon written order of the Engineer given prior to the beginning of performance of such Work. Without such written order in advance, the Contractor shall not be entitled to payment for such additional materials or Work, either on the principle of quantum merit, or unjust enrichment, extra work, or any other legal or equitable theory. Claims for extra Work (including materials) shall be filed with the Engineer within ten days after the completion of the Work (including materials) for which the claim is made. Before a claim can be made for such additional materials, the materials must be installed in their final position before a claim can be made.

SECTION 10 - RESPONSIBILITIES OF ENGINEER. The Engineer shall in all cases determine the quality and quantity of the Work and shall determine all questions relating to lines, levels and dimensions of the Work, and as to the interpretation of the plans and specifications.

SECTION 11 - CITY INSPECTORS. The City reserves the right to place inspectors on the Work, including at the place of shipment, delivery, or manufacture of materials to be used in the Work, to see that the character of the Work conforms in every respect to requirements. The Contractor hereby agrees to furnish the inspectors with the necessary facilities and assistance for carrying out their duties. The Work shall be supervised by the Engineer and the inspectors to obtain the finished product in accordance with this Contract, and with as little inconvenience to the public as reasonably possible. Nothing in this section is intended to impose any liabilities of the Contractor or to relieve it of any of its obligations.

SECTION 12 - CONTRACTOR'S SUPERINTENDENCE. The Contractor shall keep competent

and experienced forepersons in charge of their particular classes of work. Whenever the Contractor is absent from any part of the Work, the Superintendent or Foreperson in charge of that particular Work shall receive and execute the instructions from the Engineer. Any forepersons or other employees on the Work that may be considered by the Engineer to be incompetent or disorderly shall be dismissed upon the request of the Engineer.

SECTION 13 – INSPECTION OF CONSTRUCTION. The Contractor shall maintain an adequate inspection system and perform all inspections to ensure that the work performed under this contract, including that of all subcontractors, is performed per the contract requirements. The Contractor shall maintain complete inspection records and shall make them available to the City. All work shall be conducted under the general direction of the Contractor. All work is subject to City inspection and tests at all places and at all reasonable times before final acceptance to ensure compliance with the terms of this contract. Such inspections by the City are for the benefit of the City and do not relieve the Contractor of their responsibility for providing adequate quality control inspection and control measures for their work and the work of their subcontractors. Such inspections do not constitute any acceptance of the work by the City unless such partial acceptance is done in writing by the City and clearly indicates the scope of work that is being accepted by the City. As part of the inspection of construction requirement, the Contractor shall:

1. Furnish all facilities, labor and material needed for performing such safe and convenient inspections and tests as may be required by this contract. The presence or absence of City inspection staff on the project does not relieve the Contractor from compliance with any contract requirement, nor is the inspector authorized to change any term or condition of the contract without the prior written consent of the City.
2. Promptly replace or correct work, without charge, that is found to be in non-conformance with contract requirements unless, in the City's interest, the City consents to accept the work with an appropriate adjustment in the contractor price.
3. Promptly segregate and remove any rejected work or materials from the work area. If the contractor does not promptly remove or correct defective or rejected work, the City may replace or correct the work and charge the cost to the Contractor or terminate the contract for Default.
4. If, before acceptance of the entire work, the City decides to examine already completed work by removing or tearing it out, the Contractor, on request, shall promptly furnish all necessary facilities, labor, and material to perform such investigation. If the work is found to be defective or non-conforming in any material respect due to the fault of the Contractor or its lower-tier Subcontractors, the Contractor shall defray the expenses of the examination and of satisfactory reconstruction. However, if the work is found to meet applicable requirements, the City shall make an equitable adjustment for the additional services involved in examination and reconstruction, including, if completion of the work was thereby delayed, an extension of time.
5. Unless otherwise specified in this contract, the City shall accept or reject, as promptly as practicable after completion and inspection, all work required by this contract or that portion of the work the City determines can be accepted separately.

SECTION 14 - SUBCONTRACTORS. The Contractor shall not assign or subcontract any portion of this Contract without the consent of the City. The Contractor will be held responsible for the faithful completion of that part of the Work and the assignment or subcontracting will not relieve the Contractor of any of the obligations or requirements under the Contract.

SECTION 15 - DEFECTIVE WORK AND MATERIALS. The Contractor shall immediately remove and reconstruct or replace at their own expense all Work not in accordance with this Contract. The payment of the estimates shall not be considered as an acceptance of the Work included in the estimate before the final acceptance of the entire Work.

SECTION 16 - PUBLIC ACCESS/MATERIAL STORAGE. The Work shall begin at such places as the Engineer may direct and be expeditiously carried forward. The convenience of the public shall at all times be considered; no section of any street shall be entirely blocked to traffic unless it is absolutely necessary. When ordered by the Engineer, temporary crossings at such points as needed shall be provided by the Contractor at Contractor's expense. Insofar as practicable, materials may be stored in the streets, but the location and arrangements of the same must first be allowed by the Engineer. Obstructions must at all times be kept from fire hydrants. Whenever the Work in a block is completed, all surplus materials and debris shall be removed from that block.

SECTION 17 - SAFETY. The Contractor shall protect the entire Work until the final acceptance of the same. The Contractor shall be responsible for any act or omission by it or its employees or agents causing any injuries to persons or any damages to public or private property. The Contractor shall erect and maintain barricades, lights and other safety devices.

SECTION 18 - NOTICE. (a) All notices and other communications required or permitted by this contract shall be in writing and shall be given either by personal delivery, fax, or certified United States mail, return receipt requested, addressed as follows:

To the City:

Mr. Ed Venable  
Public Works - Engineering  
City of Durham  
101 City Hall Plaza  
Durham, NC 27701  
The fax number is (919) 560-4316.

To the Contractor:

*[Insert name and address]*

The fax number is \_\_\_\_\_.

(b) Change of Address. Date Notice Deemed Given. A change of address, fax number, or person to receive notice may be made by either party by notice given to the other party. Any notice or other communication under this contract shall be deemed given at the time of actual delivery, if it is personally delivered or sent by fax. If the notice or other communication is sent by United States mail, it shall be deemed given upon the third calendar day following the day on which such notice or other communication is deposited with the United States Postal Service or upon actual delivery, whichever first occurs.

SECTION 19 - INDEMNIFICATION.

(a) To the maximum extent allowed by law, Contractor shall defend, indemnify, and save harmless Indemnitees from and against all Charges that arise in any manner from, in connection with, or out of this Contract as a result of acts or omissions of Contractor or

Subcontractors or anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable. In performing its duties under this subsection "a", Contractor shall at its sole expense defend Indemnities with legal counsel reasonably acceptable to City.

(b) Definitions. As used in subsections "a" above and "c" and "d" below -- "Charges" means claims, judgments, costs, damages, losses, demands, liabilities, obligations, fines, penalties, royalties, settlements, and expenses (included without limitation within "Charges" are (1) interest and reasonable attorneys' fees assessed as part of any such item, and (2) amounts for alleged violations of sedimentation pollution, erosion control pollution, or other environmental laws, regulations, ordinances, rules, or orders. -- including but not limited to any such alleged violation that arises out of the handling, transportation, deposit, or delivery of the items or materials that are the subject of this Contract). "Indemnities" means City and its officers, officials, independent contractors, agents, and employees, but excludes the Contractor.

(c) Limitations of Contractor's Obligation. If this is in, or is in connection with, a contract relative to the design, planning, construction, alteration, repair or maintenance of a building, structure, highway, road, appurtenance or appliance, including moving, demolition and excavating connected therewith, then subsection "a" above shall not require the Contractor to indemnify or hold harmless Indemnities against liability for damages arising out of bodily injury to persons or damage to property proximately caused by or resulting from the negligence, in whole or in part, of Indemnities.

(d) Nothing in subsections "a", "b" or "c" above shall affect any warranties in favor of the City that are otherwise provided in this Contract. This Section is in addition to and shall be construed separately from any other indemnification provisions that may be in this Contract.

(e) Patent exception. Contractor shall not be liable under this Section for Charges directly resulting from an alleged violation of patent rights where the City has specified the particular design, process, or invention as to which the patent infringement is alleged, and either (1) the Contractor had no reason to believe an infringement might occur or might be alleged, or (2) the Contractor had reason to have such a belief and gave immediate notice to the City of such possible infringement.

SECTION 20 - RELEASE OF CLAIMS. The City may at any time during the life of this Contract require a full release of all claims arising out of the Work and may withhold any estimate due the Contractor until such release is produced. The release shall be in the form reasonably satisfactory to the Engineer.

SECTION 21 - BONDS AND INSURANCE. The Contractor shall maintain insurance not less than the following:

**Commercial General Liability**, covering

- premises/operations
- products/completed operations
- broad form property damage
- explosion, collapse, and underground hazards if the hazards exist in the performance of this contract
- contractual liability
- independent contractors, if any are used in the performance of this contract

- City of Durham must be named additional insured, and an original of the endorsement to effect the coverage must be attached to the certificate (if by blanket endorsement, then agent may so indicate in the GL section of the certificate, in lieu of an original endorsement)
- combined single limit not less than \$1,000,000 per occurrence; aggregate limit not less than \$2,000,000 per year

**Automobile Liability Insurance**, covering

- owned, hired, or borrowed vehicles
- employee vehicles, if used in performance of this contract
- combined single limit not less than \$1,000,000 per occurrence; aggregate limit not less than \$2,000,000 per year

**Workers' Compensation Insurance**, covering

- statutory benefits;
- covering employees; covering owners partners, officers, and relatives (who work on this contract)
- employers' liability, any limit.

**Insurance shall be provided by:**

- companies authorized to do business in the State of North Carolina
- companies with Best rating of A or better.

**Insurance shall be evidenced by a certificate:**

- providing notice to the City of not less than 60 days prior to cancellation or reduction of coverage
- certificates shall be addressed to:  
City of Durham, North Carolina  
attention: Finance Director  
101 City Hall Plaza  
Durham, NC 27701
- both the insurance certificate and the additional insured endorsement must be originals and must be approved by the City's Finance Director before Contractor can begin any work under this contract.

**SECTION 22 - CONTRACT TIME. EXTENSION OF CONTRACT TIME. LIQUIDATED DAMAGES.**

(a) Start Work - The Contractor is to start the Work within ten (10) days after the date of the Notice to Proceed from the Engineer and shall expeditiously and diligently prosecute it with adequate forces to completion within 210 calendar days after the date of the Engineer's Notice to Proceed. In this Section, the date on which completion is due is referred to as the Contract Time. If the amount of work to be done under this Contract is increased, the Contract Time may be extended as stated in the Changes and Modification of Contract Section of this Contract.

(b) Liquidated Damages. The parties recognize that the City will suffer financial loss if the Work is not completed within the Contract Time (including adjustments and extensions, if any). They also recognize the delays, expense, and difficulty to both parties involved in proving or contesting the amounts of those losses. Instead of requiring proof of those amounts, it is agreed that Contractor shall be liable for and shall pay the City \$400.00 per day of delay as liquidated damages, and not as a penalty, for each day after the Contract Time until completion. The amount stated as liquidated damages is agreed to be a reasonable estimate of the City's losses and expenses for delays, including inspections,



engineering services, and administrative costs. If any part of those delays is caused by the City, liquidated damages shall not be charged for the portion of the delay time that was caused by the City but shall be charged for the portion not so caused. The City may collect liquidated damages by retaining moneys otherwise due Contractor in the amount of such damages, and by other legal means. The enforceability of this paragraph eliminates any claim by the City for actual damages for Contractor's delay in attaining completion. Nothing in this Section shall reduce the City's rights under other sections of the Contract. To the extent allowed by law, if the Work is delayed but the delay is not caused solely by the City or the City's agent, the City shall extend the Contract Time by an amount equal to the delay, as the exclusive remedy of the Contractor for said delay. To the extent allowed by law, if the Work is delayed and the delay is caused solely by the City or the City's agent, the City shall extend the Contract Time by an amount equal to the delay, as the exclusive remedy of the Contractor for said delay. Notwithstanding anything in this section or elsewhere in the Contract to the contrary, it is agreed that nothing in this section or elsewhere in the Contract is intended to forbid or limit compensable damages for delays caused solely by the City or the City's agent. If the Contractor is entitled to compensable damages for a delay, the Contractor shall not receive an extension of Contract Time for the same delay. In this Section, "City or City's agent" does not include prime contractors or their subcontractors.

#### SECTION 23 - SUSPENSION/TERMINATION OF WORK.

(a) If the Work shall be abandoned by the Contractor, or if this Contract or any part thereof shall be assigned or subcontracted without the previous written consent of the City, or if the Contract or any claim there under shall be assigned by the Contractor otherwise than is as herein specified, or if at any time the Engineer shall be of the opinion, and so certify in writing to the City Council that (1) the Work is unnecessarily or unreasonably delayed, or (2) that the Contractor is willfully violating any terms or conditions of this Contract, or (3) the Contractor is not executing the Contract in good faith, or (4) the Contractor is not making such progress in the execution of said Work as to indicate its completion within the time specified, then the City shall have the right to notify the Contractor to discontinue all work, either on the whole or on any part or parts thereof, to the extent specified by the City; and, upon said notification, the Contractor shall immediately discontinue Work in accordance with said instructions; and the City shall thereupon have the power and the right to enter upon said Work and take possession thereof and to take possession of and use such Devices ("Devices" being defined in this Section 21(a) as trucks, ditching machines, bulldozers, shovels, implements, tools and appliances, and all other means of construction of every description and any and all materials, both such as enter into the completed Work and such as are used in and about the same), which may be found on or along the line of the Work; and may procure other Devices, and employ by contract or otherwise, and such manner and at such prices as the City may determine, and to the extent which the City may deem necessary, to be used in, and to work at, the completion of the Work, and to carry out the terms of this Contract, or such part or parts of it as the City may have designated; also, to charge the expense of all said Work (including superintendence, labor, and Devices), to said Contractor; and the expense so charged shall be deducted and paid to the City out of such moneys as may be due or become due at any time thereafter to the Contractor under this Contract, or any part thereof. In case such expense is less than the sum which would have been payable under this Contract, if the same had been completed by the Contractor, it is

agreed that the Contractor shall be entitled to receive the difference; and in case such expense shall exceed the sum which would have been payable under this Contract, if the same had been completed by the Contractor, then the Contractor shall pay the amount of such excess to the City on notice from the City of the excess so due.

It is further agreed that neither an allowed extension of Contract Time nor the delivery and acceptance of any material called for by this Contract shall be held as a waiver by the City of the right to assume control of this Contract for the reasons herein set forth and in the manner provided. The City's failure to enforce its rights under this Contract shall not constitute a waiver of the right to assert that right afterwards.

(b) (i) The City may, at any time, terminate this Contract for its convenience and without cause by giving written notice to the Contractor and the Contractor's sureties on the performance bond and payment bond, if any. That notice will not be considered to be given pursuant to this Section 21(b) unless it states that it is given pursuant to Section 21(b) of this Contract. Upon receipt of that notice, the Contractor shall cease performance of the Contract, place no further orders and enter into no further subcontracts for materials, labor, services, or facilities which would have been entered into had the Contract not been terminated, and turn over possession of the site to the City, except as follows:

- 1) The Contractor shall take actions necessary for the protection and preservation of the Work, and site, including those actions required by the Contract, except to the extent otherwise directed by the City;
- 2) The Contractor shall erect and leave in place barricades, lights, and other safety devices as are appropriate for the protection of the public, including those devices required by the Contract, except to the extent otherwise directed by the City.

(ii) Upon such termination, the City shall pay the Contractor for all Work performed on site (including all materials located on site) as of the termination date, except to the extent previously paid for. That Work shall be paid in accordance with the unit prices stated in the proposal. If Work has been partially performed (including materials that are partially installed), and such Work is reasonably capable of being completed in accordance with the requirements of the Contract, the City shall pay the portion of the unit price multiplied by the percentage of completion attained for that Work

(iii) If the Contractor had ordered materials before receiving the notice of termination and cannot cancel the order without cost or charge, it shall immediately notify the City of the costs and charges (restocking, penalties, etc.) that the Contractor will be liable for if it refuses or returns the materials and the costs and charges that the Contractor will be liable for if it accepts the materials, and the Contractor will implement the City's decision with respect to whether to refuse, return, or accept those materials. The City shall reimburse the Contractor for the costs and charges that accrue because of the decision, to the extent that the Contractor communicated the nature of those costs and charges to the City before the City made its decision, provided that unit prices stated in the proposal shall control for materials that are accepted. If the City's decision is for the Contractor to accept materials, the City shall become the owner of them upon delivery to the site or at such other place as the City shall specify.

(iv) In case of termination pursuant to this Section 21(b), the City shall pay the Contractor a termination fee of one hundred dollars (\$100.00) in addition to other amounts due pursuant to this Section 21(b).

(v) If the Contractor performs work pursuant to directions given by the City as described in subsection "i" of this Section 21(b) for the protection and preservation of the Work or of the public, the City shall pay the Contractor for such protection and preservation work to the extent that it is greater than the Contractor would have done during or at the end of a work day had the termination notice not been sent.

(vi) Except as stated in this Section 21(b), the Contractor shall not be entitled to any payment from the City because of termination, whether on the basis of overhead, profit, damages, or other economic loss, or otherwise. The Contractor agrees that the City's right to terminate pursuant to this Section 21(b) is entirely discretionary with the City.

**SECTION 24 – PAYMENT FOR STORED MATERIALS.** In the preparation of partial estimates, the City may authorize material delivered to the site and preparatory work done to be taken into consideration subject to the following requirements:

1. The materials have been submitted and approved for use on the project.
2. The materials are satisfactorily stored to protect the materials for their intended use.
3. The contractor shall provide a detailed paid bill of sale or invoice that notes the type and quantity of material included on the invoice, complete with a schedule of unit price values.
4. The contractor shall provide a separate inventory control schedule with each partial payment request that reflects that type of stored material, quantity, unit prices, a schedule noting opening, used that period and ending inventory of materials and total summary of stored material amount being requested on the partial estimate. A copy of a suitable form to be used by the contractor is included in the APPENDIX.
5. The contractor shall provide a certification statement with the request noting that they are responsible for the safety and security of subject materials and assume all risk for loss of materials. An Affidavit form to be completed by the contractor for payment of stored materials is included in the APPENDIX.

Materials delivered to the Contractor at locations other than the project site may also be taken into consideration if, in addition to the above, the contractor provides:

1. The materials are being stored in a secured and protected facility and environment. The location for such storage shall be approved by the City.
2. The owner of the off-site location shall provide a waiver of lieu against the materials being stored at the off-site location.

**SECTION 25 - PROGRESS PAYMENTS –**

- A. Payment: Subject to the additional terms set forth herein, the Contractor shall submit a progress payment request to the City which reflects work completed through the 25th day of each month, or other date as agreed upon with the City, for work which meets the standards of quality established under the contract completed during the month. All payment requests must be approved by the City prior to payment. Along with each request for progress

payment, the Contractor shall have a certification stating the following, or payment shall not be made:

*I hereby certify, to the best of my knowledge and belief, that: (1) the amounts requested are only for performance in accordance with the specifications and the terms and conditions of the contract, (2) payments to lower-tier Subcontractors and suppliers have been made from previous payments and payment will be made within ten days from the proceeds of this payment, (3) the amount requested does not contain any amounts the Contractor intends to withhold or retain from a lower-tier Subcontractor, and (4) no claim or dispute has arisen since the last request for payment that might involve additional payments from the City for which written notice has not been given to the City.*

The Contractor is to provide a completed payment request and certification, with all supporting documentation and schedule updates, to the City on or before the 30<sup>th</sup> day of the month. The City will advise the contractor within seven (7) days after receipt of the contractor's invoice request of any deficiency that may exist in the request. Such notice to the contractor will extend the due date of any payment due the contractor until the deficiency is corrected and an acceptable payment request has been received. The City will make payment to the contractor within 30 days after receipt of an acceptable payment request meeting the terms of the contract.

In addition, the final payment request will also be supported by the submission of a waiver of lien and final release of claims document. Any request submitted by Contractor without the completed certification and/or the final release form will be rejected. The waiver of lien and final release must be signed by an owner, principal partner, or authorized officer of the Contractor.

- B. Retainage and Other Deductions: Partial payments shall be made as indicated herein. The City shall retain an amount equal to 5% of the amount of the monthly earnings until such time as the project is complete. The City may also withhold additional funds in the event that unsatisfactory progress is not being made for prosecution and completion of the work or as outlined in the additional payment withholding section below. The City may also deduct liquidated damages or other amounts as outlined in the contract for late completion of the project. When the work is substantially complete, at the sole discretion of the City, the City may retain from previously retained funds and future progress payments that amount that the City considers adequate for protection of the City and may release to the Contractor any of the remaining retained funds.
- C. It is specifically agreed that payment by THE City shall not constitute a waiver of any of the City's rights under the contract documents nor constitute or imply acceptance by the City of any portion of the contractor's work. No amount of the contract sum shall be considered due and payable until all conditions of the contract documents, including but not limited to these paragraphs are satisfied.
- D. The Contractor warrants and guarantees that title to all work, materials and equipment covered by an application for payment, whether incorporated in the project or not, will pass to the City upon receipt of such payment to the Contractor, free and clear of all liens, claims, security interests or encumbrances, and that no work, materials or equipment covered by an

application for payment will have been acquired by the Contractor, or by any other person performing the Work at the site or furnishing materials and equipment for the project, subject to an agreement under which an interest therein or an encumbrance thereon is retained by the seller or otherwise imposed by the Contractor. Nothing in the foregoing clause shall relive the Contractor from the sole responsibility for all material and work upon which payments have been made or the restoration of any damaged work.

- E. Billing Format: All payment requests submitted by Contractor shall be based upon the most recent schedule of values or unit price schedule submitted by the Contractor in accordance with the contract documents. The schedule of values or unit price schedule shall allocate the entire contract lump sum among the various portions of the Contractor's work and be prepared in such form and supported by such data to substantiate its accuracy as the City may require. This schedule, unless objected to by the City, shall be used as a basis for reviewing the Contractor's applications for payment. Applications for payment submitted by the Contractor shall indicate the percentage of completion or the actual measured quantity of each portion of the Contractor's work as of the end of the period covered by the application for payment. The Contractor's requests for progress payments must be correctly prepared and reflect work performed through the 25<sup>th</sup> of EACH month, or other such date as agreed by the City, and submitted to the City monthly during the construction performance period. The City's determination is final and binding on the Contractor. The payment request shall be submitted to the City on such form and in such format as determined by the City to accurately reflect the contract pay items and amount, work performed previously, work performed this payment request period and work performed to date. Copies of the required format will be made available to the contractor.
  
- F. Payment Request Meeting and Surveys: Prior to submission of a payment request, the Contractor will meet with the City representative to agree on the progress made, amount to be invoiced, amount of work acceptable performed and measured, and any other payment related issues. Quantity surveys shall be performed as necessary to document the quantities of work performed and the actual construction completed. The Contractor shall conduct any surveys and perform any computations as may be necessary to adequately document the quantities of work that has been performed. Copies of all such surveys and computations shall be provided to the City. The City shall make, or cause to be made, any final computations based on the final surveys performed by the Contractor to document the final work performed and in place per contract requirements.
  
- G. Payment Withheld: The City may decline to approve an application for payment and may withhold payment in whole or in part, to the extent necessarily reasonable to protect the interests of the City. The City may also decline to approve any applications for payment or, because of subsequently discovered evidence of subsequent inspections which may nullify the whole or any part of any verification of payment previously issued, to such extent as may be necessary in the City's opinion to protect the City from:
  - i. Defective Work not remedied;
  - ii. Third party claims filed or reasonable evidence indicating probable filing of such claims.

- iii. Failure of the Contractor to make payments properly to employees or sub-tiers for labor, materials or equipment, for the unpaid balance of the subcontract sum;
- iv. Unsatisfactory prosecution of the Work by the Contractor.

In the event the City receives notice of unpaid labor or materials relating to the Contractor's Work, the City may withhold payments in amounts sufficient to protect the City and its surety from claims for unpaid work or materials. When the basis for withholding such payments has been removed, payment shall be made for amounts withheld.

H. Substantial Completion and Final Payment:

- (1) When the City determines that the Work or a designated portion thereof is approximately 90% complete and ready and available for its intended use, the Contractor shall prepare for submission to the City's, a list of items (Punch List) to be completed or corrected. The City will review such list and make modifications required to complete the Work. The failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the contract documents. When the City, on the basis of an inspection, determines that the Work is substantially complete, the City shall establish the Date of Substantial Completion, shall state the responsibilities of the Contractor and shall fix the time within which the Contractor shall complete the items listed therein and forward such documentation to the City. If the Contractor does not complete all the items listed on the Punch List within the fixed time, the City shall have the right to withhold and use the necessary funds, in addition to any Retainage that may have been held, to have such items completed by another party. The Contractor shall bear any additional costs beyond the withheld Retainage amount necessary to complete the Punch List.
- (2) Upon receipt of written notice that the Work is ready for final inspections and acceptance and upon receipt of a final application for payment and reproducible "record or as-built" drawings and all other necessary construction documents, the City will promptly make such inspection and when finding the Work acceptable under the contract documents and the contract fully performed, including completion or correction of the items contained on the Punch List, the City will promptly approve final payment. After final inspection and acceptance of the Work, final payment shall be made in accordance with the Payment Clause referred to in the contract.
- (3) Neither the final payment nor the remaining retained percentage or other withheld funds shall become due until the Contractor submits to the City:
  - i. A release of all claims against the City arising under and by virtue of this contract other than such claims, if any, as may be specifically submitted and certified by the Contractor and expected by the City.
  - ii. An affidavit that all payrolls, bills for materials and equipment and other indebtedness connected with the work for which the City or its property might in any way be responsible, have been paid or otherwise satisfied.
  - iii. If required by the City, other data establishing payment or satisfaction of any such obligations such as receipts, releases and waivers or liens or any other claims arising out of the subcontract, to the extent and in such form as may be designated by the City.

The acceptance of final payment shall constitute a waiver of all claims by the Contractor and the sub-tiers for the Work.

**SECTION 26 - REGULATORY REQUIREMENTS.** The entire Work shall be done in accordance with all applicable regulations, ordinance, rules, and laws of any governmental body or entity. The Contractor shall comply with all applicable provisions of Chapter 26 of the Durham City Code (the Minority and Women Business Enterprises ordinance), as amended from time to time. The failure of the Contractor to comply with that chapter shall be a material breach of contract which may result in the rescission or termination of this Contract and/or other appropriate remedies in accordance with the provisions of that chapter, this Contract, and State law. The final version of all SDBE documents and information submitted by the Contractor and approved by the City of Durham are a legal and binding part of this Contract.

**SECTION 27 - CORRECTION PERIOD.** The Contractor at its own cost and expense will remedy all defects in workmanship and material which may be discovered within a period of one year after the final completion and acceptance of the Work.

**SECTION 28 - EMERGENCY WORK.** The Contractor shall perform emergency Work as required from time to time by the City. (Such Work may include pavement replacement, property or driveway restoration, grading, clean-up, seeding, and mulching.) In such instances, the Engineer shall give the Contractor a written notice of each item of required work or incident. (Each severable part of that Work shall be considered a separate item or incident; e.g., if three driveways must be restored, then the restoration of each driveway will be a separate item or incident.) If the Contractor fails, within seventy-two (72) hours of receipt of that notice, to perform that Work, the City may do or cause some or all of that Work to be done. If the emergency Work is a non-pay item, then the City will charge all costs and expenses of that Work, plus the City's then-current overhead charge, to the Contractor, and deduct those amounts from any money that may be due the Contractor on the next monthly estimate (or following estimates if the next estimate is insufficient) or the final payment. If the emergency Work is a pay item, then the City will charge the costs and expenses of the Work to the work order, plus administrative and overhead charge of one hundred dollars per item of required work or incident, from any money that may be due the Contractor on the next monthly estimate (or following estimates if the next estimate is insufficient) of the final payment.

**SECTION 29 - STREET APPURTENANCES.** The City reserves the right to construct, adjust, remove, rebuild, or allow the same to be done by permits, franchise, or orders, any sewers, water or gas mains, service lines, hydrants, valves or valve boxes, conduits, drains, culverts, catch basins, manholes, tracks, poles, driveways or any other street appurtenances, in whole or in part at any time prior to the completion of the Work. The Contractor shall not interfere or place any impediments in the way of those who may be engaged in the work referred to in the preceding sentence that may be done by or allowed by the City, but the City will exercise reasonable care and diligence to have the aforesaid work done in advance of the laying of the pavement. In such cases the Contractor shall not be entitled to damages either for the digging up of the street or the delay. The Contractor shall exercise such supervision of the work specified in this section as they may deem necessary to insure good material and workmanship, in order that they may properly protect themselves from the defects of the finished pavement for which they will be responsible, provided, however, that the Contractor shall be entitled to recover the amount of actual damage sustained by them by reason of injury by the City or Public Utility to such paving, sidewalks, curbing, gutter, or street

appurtenances. The actual damages to be recovered by the Contractor shall be for the labor, superintendence, and additional materials required to restore the damaged property to an acceptable condition.

**SECTION 30 - EQUAL BUSINESS OPPORTUNITIES ORDINANCE.** The Contractor shall comply with all applicable provisions of Chapter 26 of the Durham City Code (Equal Business Opportunities Ordinance), as amended from time to time. The failure of the Contractor to comply with that chapter shall be a material breach of contract which may result in the rescission or termination of this contract and/or other appropriate remedies in accordance with the provisions of that chapter, this contract, and State law. The Participation Plan submitted in accordance with that chapter is binding on the Contractor. Section 26-10(f) of that chapter provides, in part, "If the City Manager determines that the Contractor has failed to comply with the provisions of the Contract, the City Manager shall notify the Contractor in writing of the deficiencies. The Contractor shall have 14 days, or such time as specified in the Contract, to cure the deficiencies or establish that there are no deficiencies." It is stipulated and agreed that those two quoted sentences apply only to the Contractor's alleged violations of its obligations under Chapter 26 and not to the Contractor's alleged violations of other obligations.

**SECTION 31 – PROMPT PAYMENT TO SUBCONTRACTORS.** Within 7 days of receipt by the Contractor of each payment from the City under this contract, the Contractor shall pay all subcontractors (which term includes sub consultants and suppliers) based on work completed or service provided under the subcontract. Should any payment to the subcontractor be delayed by more than 7 days after receipt of payment by the Contractor from the City under this contract, the Contractor shall pay the subcontractor interest, beginning on the 8<sup>th</sup> day, at the rate of 1% per month or fraction thereof on such unpaid balance as may be due. By appropriate litigation, Subcontractors shall have the right to enforce this subsection (a) directly against the Contractor, but not against the City of Durham. If the Engineer determines that it is appropriate to enforce this subsection:

(a), the City of Durham may withhold the sums estimated by the Engineer to be sufficient to pay this interest from progress or final payments to the Contractor.

(b) Nothing in this section shall prevent the Contractor at the time of invoicing, application, and certification to the City from withholding invoicing, application, and certification to the City for payment to the subcontractor for unsatisfactory job progress; defective goods, services, or construction not remedied; disputed work; third-party claims filed or reasonable evidence that such a claim will be filed; failure of the subcontractor to make timely payments for labor, equipment, and materials; damage to the Contractor or another subcontractor; reasonable evidence that the subcontract cannot be completed for the unpaid balance of the subcontract sum; or a reasonable amount for retainage not to exceed 10%.

(c) The Engineer may require, as a prerequisite to making progress or final payments, that the Contractor provide statements from any subcontractors designated by the Project Manager regarding the status of their accounts with the Contractor. The statements shall be in such format as the Project Manager reasonably requires, including notarization if so specified.

**SECTION 32 - CONTRACT DOCUMENTS.** All documents, including Instructions to Bidders, all Specifications, City of Durham Water & Sewer Construction Specifications, City of Durham Street Construction Specifications, Proposal, Instructions for Payment, this instrument consisting of 33



numbered sections, Bonds, and Insurance Certificate are hereby made a part of this Contract. This agreement is to be executed in three **(3)** originals.

SECTION 33 - CONTRACTOR CERTIFICATION. The Contractor hereby certifies that it has read each and every clause of the Contract, and fully understands the meaning of the same and agrees that it will comply with all their terms.

**IN TESTIMONY WHEREOF, the City of Durham has caused these presents to be signed in its name by its City Manager or Assistant City Manager and its corporate seal to be hereto affixed and attested by the City Clerk, all by order of the City Council of the City of Durham; and the Contractor's officers, having been duly authorized by resolution of its Board of Directors, hereby execute this Contract under the seal of and on behalf of the Contractor, as of the \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.**

CITY OF DURHAM

By \_\_\_\_\_  
CITY MANAGER

Attest:

\_\_\_\_\_  
City Clerk

\_\_\_\_\_  
Typed or Printed Name of Contractor

\_\_\_\_\_  
PRESIDENT

\_\_\_\_\_  
ADDRESS

(Affix Corporate Seal)

Attest:

\_\_\_\_\_  
Secretary

PERFORMANCE BOND AND PAYMENT BOND

Date of Contract: \_\_\_\_\_

Contract Name and Number: \_\_\_\_\_

\_\_\_\_\_

Name of Principal (Name of Contractor): \_\_\_\_\_

\_\_\_\_\_

Name of Surety: \_\_\_\_\_

\_\_\_\_\_

Name and Address of Surety's NC Resident Agent: \_\_\_\_\_

\_\_\_\_\_

Contracting Body: CITY OF DURHAM, a North Carolina municipal corporation

\_\_\_\_\_

Amount of Performance Bond (in words and figures): \_\_\_\_\_ dollars (\$ \_\_\_\_\_)

Amount of Payment Bond: same dollar amount as the dollar amount of Performance Bond.

Date of Execution of these Bonds: \_\_\_\_\_

\* \* \* \* \*

KNOW ALL PERSONS BY THESE PRESENTS, that we, the PRINCIPAL AND SURETY above named, are held and firmly bound unto the above named Contracting Body, hereinafter called the Contracting Body, in the penal sum of the amount stated above for the payment of which sum well and truly to be made, we bind ourselves, our heirs, administrators, and successors, jointly and severally, by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the Principal entered into a certain Contract with the Contracting Body, numbered as shown above and hereto attached:

NOW THEREFORE, if the Principal shall well and truly perform and fulfill all the undertakings, covenants, terms, conditions, and agreements of said Contract during the original term of said Contract and any extensions thereof that may be granted by the Contracting Body, with or without notice to the Surety, and during the life of any guaranty required under the Contract, and shall also well and truly perform and fulfill all the undertakings, covenants, terms,

conditions, and agreements of any and all duly authorized modifications of said Contract that may hereafter be made, notice of which modifications to the Surety being hereby waived, then this obligation to be void; otherwise to remain in full force and virtue. As used hereinabove, "modifications" shall include, without limitation, changes (including, without limitation, changes granting extensions of time) and additions to with respect to the Work, scope of work, and specifications.

\* \* \* \* \*

KNOW ALL PERSONS BY THESE PRESENTS, that we, the PRINCIPAL AND SURETY above named, are held and firmly bound unto the above named Contracting Body, hereinafter called the Contracting Body, in the penal sum of the amount stated above for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the Principal entered into a certain Contract with the Contracting Body, numbered as shown above and hereto attached:

NOW THEREFORE, if the Principal shall promptly make payment to all persons supplying labor and material in the prosecution of the Work provided for in said Contract, and any and all duly authorized modifications of said Contract that may hereafter be made, notice of which modifications to the Surety being hereby waived, then this obligation to be void; otherwise to remain in full force and virtue. As used hereinabove, "modifications" shall include, without limitation, changes (including, without limitation, changes granting extensions of time) and additions to or with respect to the Work, scope of work, and specifications.

\* \* \* \* \*

The Performance Bond and the Payment Bond are being combined here only for purposes of convenience in signing and acknowledging, and the obligations of the Principal and of the Surety are the same as if the bonds were on separate documents. Each bond is in the dollar amount stated above, and the amounts of these bonds are not combined. The Surety agrees that both of these bonds are fully binding on it whether or not the Principal executes these bonds. These bonds are given pursuant to Article 3 of Chapter 44A of the NC General Statutes.

IN WITNESS WHEREOF, the above-bounden parties have executed this instrument (for both the Performance Bond and the Payment Bond) under their several seals on the date of execution indicated above, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

\_\_\_\_\_

(name of Principal)

ATTEST:

\_\_\_\_\_  
\_\_\_\_\_  
Secretary

By: \_\_\_\_\_  
\_\_\_\_\_  
President

(Affix corporate seal)

\_\_\_\_\_  
(name of Surety)

\_\_\_\_\_  
(name of attorney in fact)

(Affix corporate seal)

(Note: If you use a raised corporate seal, press hard enough to make it legible.)

ACKNOWLEDGEMENT OF CONTRACTOR'S EXECUTION OF CONTRACT,  
PERFORMANCE BOND, AND PAYMENT BOND

State of \_\_\_\_\_ County of \_\_\_\_\_

I, \_\_\_\_\_, a notary public for the aforesaid county and state, certify that \_\_\_\_\_ personally appeared before me this day, and acknowledged that he or she is \_\_\_\_\_ Secretary of \_\_\_\_\_, a corporation, and that by authority duly given and as the act of the corporation, the foregoing (1) Contract with the City of Durham and (2) Performance Bond and Payment Bond with respect to the Contract, were signed in its name by its \_\_\_\_\_ President, whose name is \_\_\_\_\_, sealed with its corporate seal, and attested by him/herself as its said Secretary or Assistant Secretary.

This the \_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

\_\_\_\_\_  
NOTARY PUBLIC

My commission expires: \_\_\_\_\_

ACKNOWLEDGEMENT OF SURETY'S EXECUTION OF  
PERFORMANCE BOND, AND PAYMENT BOND

State of \_\_\_\_\_ County of \_\_\_\_\_

I, \_\_\_\_\_, a Notary Public for said county and state, certify that \_\_\_\_\_, personally appeared before me this day and acknowledged that he or she is Attorney in Fact for \_\_\_\_\_, the Surety named in the foregoing Performance Bond and Payment Bond, in both of which bonds the contracting body is the City of Durham, and that he or she executed said bonds, under the seal of said Surety, on behalf of said Surety.

This the \_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

\_\_\_\_\_  
NOTARY PUBLIC

My commission expires: \_\_\_\_\_

**(ATTACH CERTIFICATES OF INSURANCE)**



**(POWER OF ATTORNEY TO BE ATTACHED)**

CERTIFICATE OF FINANCE OFFICER

This instrument has been pre-audited in the manner required by the Local Government Budget and Fiscal Control Act.

This \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

\_\_\_\_\_  
FINANCE OFFICER, CITY OF DURHAM

NON-COLLUSION STATEMENT BY CONTRACTOR

The City of Durham prohibits collusion, which is defined as a secret agreement for a deceitful or fraudulent purpose.

I, \_\_\_\_\_ affirm that I have not engaged in collusion with any City employee(s), other person, corporations or firms relating to this bid, proposals or quotations. I understand collusive bidding is a violation of state and federal law and can result in fines, prison sentences, and civil damage awards.

Signature of Contractor \_\_\_\_\_

**APPENDIX A**  
**SDBE Reporting Forms and Listing**  
**CITY OF DURHAM**  
**SUBCONTRACTOR MONTHLY RECORD OF PAYMENT REPORT**

<b>THIS DOCUMENT MUST REFLECT ALL SUBCONTRACTORS &amp; MUST BE SUBMITTED WITH MONTHLY INVOICE FOR PAYMENT</b>	
<b>PROJECT NAME: CONTRACT#:</b>	<b>DATE FORM SUBMITTED:</b>
<b>COMPANY NAME:</b>	<b>WORK PERIOD ENDING:</b>
<b>FEDERAL TAX ID#:</b>	<b>ADDRESS:</b>
	<b>CONTACT PERSON:</b>

Subcontractor/Vendor ID (Street Address/Zip/Telephone)	Indicate Ownership Status	Description Of Work	Total Sub- Contract Amount	Amount Paid For The Period	Total Amount Paid To-Date	Percentage Of Work Completed	Scheduled Start Date	Scheduled End Date
Total M/SDBE Subcontracts Awarded/%			\$	%	Total W/SDBE Subcontracts Awarded/%			
Total M/SDBE Dollars Paid-To-Date/%			\$	%	Total W/SDBE Dollars Paid-To-Date/%			
Total Non-Minority Subcontracts Awarded/%			\$	%	Total Non-W/SDBE Subcontracts Awarded/%			
Total Non-Minority Dollars Paid-To-Date/%			\$	%	Total Non W/SDBE Dollars Paid-To-Date/%			

*The undersigned certifies that the information recorded above is correct, and that each of the representations set forth above is true. The undersigned further acknowledges that any misrepresentation hereon may result in termination of contract and/or prosecution under applicable Federal and State laws concerning false statements and false claims.*

Company Representative \_\_\_\_\_ Title: \_\_\_\_\_ Date: \_\_\_\_\_

**APPENDIX A**  
**SDBE Reporting Forms and Listing**  
**CITY OF DURHAM**  
**Equal Business Opportunity Program**  
**Final Subcontracting Report**

**THIS FORM MUST BE COMPLETED AND SUBMITTED TO THE PROJECT/CONTRACT ADMINISTRATOR FOR SUBMITTAL TO THE EO/EA DEPARTMENT WITHIN FIFTEEN (15) DAYS AFTER FINAL INSPECTION OF CONTRACT WORK.**

Company Name: \_\_\_\_\_

Project Name: \_\_\_\_\_

Address: \_\_\_\_\_

Federal Tax ID#: \_\_\_\_\_

Date Submitted: \_\_\_\_\_

Date of Final Inspection \_\_\_\_\_

Total Final Contract Price: \_\_\_\_\_

The following subcontractors performed work on the above project:

TYPE OF WORK	COMPANY NAME/ADRESS	FINAL PRICE	% OF TOTAL CONTRACT PRICE

**Signature of Company Representative** \_\_\_\_\_

**Title:** \_\_\_\_\_ **Date:** \_\_\_\_\_

Contract Compliance \_\_\_ Approved \_\_\_ Denied

Signature: \_\_\_\_\_

**APPENDIX A**  
**SDBE Reporting Forms and Listing**

<b>Name</b>	<b>Mailing Address</b>	<b>City</b>	<b>State</b>	<b>Zip Code</b>	<b>Gender/ Race ID</b>	<b>Contact</b>	<b>Phones</b>	<b>Services</b>
Andre Laws Grading & Backhoe Service	2 Wachonda Court	Durham	NC	27713	M	Andre Laws	(919)806-3887;FAX(919)806-1847;CELL(919)427-2583;alawsjr@aol.com	Grading, Clearing and Excavation
ARM Construction Company, Inc.	1526 Bennett Street	Raleigh	NC	27604	M	Marion Goodson, Jr.	(919)829-0905; FAX (919)828-4529; armconst.@hotmail.com	Demolition; Grading; Clear and Grub; Storm Drainage; Trucking
Arrington Contractual Service, Inc.	2102 Meade Ln.	Durham	NC	27707	M	Tonya Arrington	919-486-2094;919-401-5307;FAX 919-530-1770;TARRINGTON1@nc.rr.com	Masonry; Concrete; Carpentry; Hauling
B & A Concrete	190 Alyssum Drive	Four Oaks	NC	27524	M	Billy Giles	919-934-6953/919-427-3966(Cell)	concrete; masonry; curb and gutter; sidewalks; handicap ramps
Bishop Landscaping & Trucking	P. O. Box 11353	Durham	NC	27703	M	Andrew Bishop, Jr.	(919) 683-3034; Fax (919) 667-1456; CELL (919)801-3403	Lawn Care; Cutting, Trimming Hedges, Fencing, Tree Removal, Demolition, Hauling, Clearing
C & L Turf Works, Inc.	1405-G Old Oxford Highway	Durham	NC	27704	M	Charles Swann	919-471-4933/FAX919-477-7487/Cell919-730-2258clturfworks@aol.com	grading; excavation; land clearing; hauling;demolition; backhoe services
Certified Concrete Construction, Inc.	10416 Chapel Hill Road	Morrisville	NC	27560	W	Joel Sousa	919-481-6700/FAX919-481-9058/cconstruction@bellsouth.net	concrete flat work; curb & gutter; sidewalk; concrete paving; dumpster pads; wheelchair ramps; driveways

**APPENDIX A**  
**SDBE Reporting Forms and Listing**

Citywide Construction Company	7943 Halyard Terrace	Chesterfield,	VA	23832	M	Tonya Belfield; Carlton Belfield	(804) 639-7224; Cell-(804) 339-0839; tbelfield@att.net	Demolition, hauling, excavation, paving, grading, landscaping
Civil Construction & Consulting, Inc.	1419 Bahama Road	Bahama	NC	27503	W	Kathy Powell	919-477-4611/919-477-5863	concrete, grading, storm drain pipe, erosion control measures
Cobra International Trucking	100 Roberts Street	Carrboro	NC	27510	M	Jacob Jacobs	(919) 680-2883; FAX (919) 680-2883	Hauling
Coharie Construction Company, Inc.	PO Box 558	Salemburg	NC	28385	M	Frank Arnette	(910)483-5847; FAX (910)483-5847	Masonry; Concrete; Reinforced Concrete; Highway Construction; Masonry Drainage Structures; Curb & Gutter
Complete Lawn Care	5853 Sandstone Drive	Durham	NC	27713	M	Robert Grimsley	(919)544-7306;FAX (919)544-7131;CELL(919)201-9646;Pg(919)484-5141	Landscaping; lawncare; hauling topsoil, gravel and sand
Contract Grading, Inc.	1433 Camden Avenue	Durham	NC	27573	W	Loraine Pool, K.D. Pool	919-369-9886/919-597-9332	clearing; grading; utilities
Covenant Trucking Company	P. O. Box 1000	Youngsville	N.C.	27596	M	Joe N. Jones	(919) 562-0124; Fax-(919) 554-8978; Cell-(919) 291-6339	hauling
Cruz Brothers Concrete, Inc.	1572 Payne Road, #75	Graham,	N.C.	27253	H	Santana Cruz	(336) 376-0787; Fax-(336) 376-1115	Concrete curb & gutter, sidewalks, slabs, driveways
David Hinton Construction Co., Inc.	11033 Highway 222 West	Middlesex,	N.C.	27557	M	David Hinton	(919) 284-2386; Fax-(919) 284-9152; Cell-(919) 868-5874	curb & gutter; sidewalks; slab work

**APPENDIX A**  
**SDBE Reporting Forms and Listing**

Donnell Thompson Construction Company	P. O. Box 2823	Chapel Hill,	N.C.	27515	M	Naschica Thompson	(919) 960-2660; Fax-(919) 960-2656	general construction services; new building construction services; paving; patch; sealing; resurface; curbing; stripping; seal coating
Earth Reformers, Inc.	P.O. Box 11678	Durham	NC	27703	M	Kirk Bradsher, Jr.	(919)596-9361; FAX (919)596-0952; earthreformers@aol.com	Grading & Hauling
George Harris Trucking	401 Greystone Drive	Durham	NC	27703	M	George Harris	919-598-0605/Cell919-730-9934/NoFAX/No email	hauling, seeding, mowing, landscaping
Go Forth Construction Co.	617 Bernice St.	Durham	NC	27703	M	Charlie Wearing		hauling, painting, roofing, demolition, concrete, sheetrock
H. Richardson & Company, Inc.	5104 Sky Lane Drive	Durham	NC	27704	M	Henry Richardson or Maurice Smith	(919)536-7300; FAX (919)688-7512; hr.richardson1@verizon.net	General Contracting (Highway); Construction Inspection; Technical Assistance Provider to Engineers and Land Surveyors, such as: Field Testing , Data Collection ; traffic control ; erosion control ; asphalt or pavement repair; steel fabrication
Hairston Enterprise	3102 Hornbuckle Place	Durham	NC	27707	M	Vincent C. Brown, Sr.	919-493-7998/919-493-4808	general building construction; demolition; electrical; grading; utilities

**APPENDIX A**  
**SDBE Reporting Forms and Listing**

Harold A. Puryear Trucking Co.	5844 Lease Lane	Raleigh	NC	27613	W	Ola Puryear	(919)787-4175	Hauling (Aggregates, etc.) Sub-Contracting
Holmes Contracting, Inc.	P.O. Box 1038	Cary	NC	27512	M	Henry Hardy	(919)851-5897; fax(919)851-0297;Hhardy@earthlink.net	General Contracting (Highway, Building); Street Constuction; Site Development; Commercial Building Contracting; Greenways; Grading
James Barrett Trucking	8616 Clivedon Dr	Raleigh	NC	27615	M	James Barrett	(919)848-9085; Fax (919)848-9085; Cel (919)818-3890	Hauling
JLK Grading Company	39 Tants Way	Zebulon	NC	27597	W	Kelly Ingino	919-496-2316/919-868-3845/JLKGradingCompany@msn.com/Cell868-3845	grading, flatwork,curb & gutter, tree protection, silt fence,storm drain, subgrade utility structures
Louis Coley Trucking	9 Coley"s Way	Franklinton	NC	27525	M	Louis T. Coley	919)494-2350;fax(919) 494-2350;cell(919) 369-2566	Hauling
M. L. Morgan Enterprises, Inc.dba Morgan Trucking	P. O. Box 509	Wendell	NC	27591	W	Merri Lynne Morgan, Clint Newsome	(919)366-2515; FAX (919)365-365;mmorgan@clink.net	Hauling, Landscaping
Matt"s Trucking, Inc.	610 Hester Store Road	Roxboro	NC	27574	W	Sharon Solomon	(336)597-5654;FAX (336)597-8727Cell(336)592-0563;Matt@sinc.net	Hauling
Mayo Farms, Inc.	1373 High Plains Rd.	Roxboro	NC	27574	W	Sherree Talley	(336)599-0074; (919)471-1844; FAX 336-599-0153	Hauling



**APPENDIX A**  
**SDBE Reporting Forms and Listing**

P & J Contracting Co., Inc.	3010 Ridgewood Avenue	Baltimore	MD	21215	M	Pless B. Jones	(410)367-2475; FAX (410)367-4103; Pager (800) 592-1752	General Contracting(Utilities); Demolition; Hauling; Paving; Grading; Roofing; Carpentry; Masonry; Concrete; Excavating; asbestos removal
Pettiford Trucking	3260 Hurdle Mills Road	Roxboro	NC	27574	M	Leonard Pettiford	(336)599-9957;FAX(336)599-7731;Cell (336)504-3247	Hauling, Gravel, Dirt and Stone for Road Construction and Other Construction Projects
Price"s Quality Maintenance, Inc.	38 Weaver Road	Youngsville	NC	27596	M	Ted Price	919-422-5745 / 919-562-1881/ tprice9258@aol.com	landscaping; mulching; seeding; installation & finish grading
R. E. Thorb Masonry Co., Inc.	3008 Gumtree Court	Raleigh	NC	27610	M	Roy E. Thorb	(919) 755-0575 Fax: (919) 755-3835 M:(919) 880-8424	Masonry (Street Utility, Concrete Curb & Gutter, Culverts)
RL Enterprises of N.C. Inc.	P. O. Box 12470	Durham,	N.C.	27709	M	Lloyd Hampton	(919) 868-2356 (919) 806-8016 MELAHAMP@aol.com	Hauling
Stay Alert Safety Services, Inc.	P. O. Box 467	Kernersville,	NC	27205	W	Melissa Babcock	(336) 993-2828; Fax-(336) 993-6929	traffic control safety products(sales & rental), sign installation, traffic control plans

## APPENDIX B SALES TAX FORMS

### Reimbursable Sales and Use Tax Statement

Payment Application No. \_\_\_\_\_

Estimate No. \_\_\_\_\_

Name of Contractor: \_\_\_\_\_

Project: \_\_\_\_\_

1. Type of property purchased *	2. Date property purchased	3. Name of vendor	4. Invoice number	5. Date of invoice	6. N. C. county in which purchased.**	7. Amount of State sales and use taxes paid	8. Amount of local sales and use taxes paid	9. Total of columns 7 & 8

Grand totals of columns 7, 8, & 9 for all pages of this pay application/estimate. //			
--	--	--	--

Notes: \* If the invoice clearly specifies the property for which tax reimbursement is being requested, you need not list the property on this form.

\*\* In column 6, if not purchased in N. C., write *Not in N.C.*

*Add extra pages as needed. Total number of pages, including this page, in this request: \_\_\_\_\_. Do not include invoices in that page count. In addition to the pages referred to above, invoices that substantiate this statement are attached.*

CERTIFICATION: The undersigned individual certifies (1) he or she is an employee or principal of the Contractor that is filing this form with the City to request reimbursement for N. C. State and local sales and use taxes that the Contractor has paid, (2) all of the properties listed above, and on all pages, if any, added to this page, and designated on the attached invoices, are building materials, supplies, fixtures, and equipment that have become or will become a part of or annexed to a building or structure that is owned or leased by the City of Durham and is being erected, altered, or repaired for use by the City of Durham in the project named above, (3) no tax on scaffolding, tools, equipment repair parts, equipment rentals, forms for concrete, or fuel to operate machinery or equipment is included, and (4) all of the information on this form, and on all pages, if any, added to this page, is true.

\_\_\_\_\_  
signature of individual

\_\_\_\_\_  
typed or printed name of individual

Sworn to and subscribed before me, this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

My commission expires:

\_\_\_\_\_  
022304RW

\_\_\_\_\_  
Notary Public

## Reimbursable Sales and Use Tax Statement, Continuation page

Enter totals of columns 7, 8, and 9 ,added to totals from all pages, into page 1. This page is used whether page 1 is signed by the Contractor or the Subcontractor.  
022304RW

## Reimbursable Sales and Use Tax Statement by Subcontractor

*This line is to be completed by the Contractor:* **Payment Application No.** \_\_\_\_\_ **Estimate No.** \_\_\_\_\_

**Name of Contractor:** \_\_\_\_\_ **Name of Subcontractor** \_\_\_\_\_

Project: \_\_\_\_\_

[illegible]

Grand totals of columns 7, 8, & 9 for all pages of this pay application/estimate.			
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Notes: \* If the invoice clearly specifies the property for which tax reimbursement is being requested, you need not list the property on this form.

\*\* In column 6, if not purchased in N. C., write *Not in N.C.*

Add extra pages as needed. Total number of pages, including this page, in this request: \_\_\_\_\_. Do not include invoices in that page count. In addition to the pages referred to above, invoices that substantiate this statement are attached.

**CERTIFICATION:** The undersigned individual certifies (1) he or she is an employee or principal of the Subcontractor that is submitting this form with the Contractor so that the Contractor may request reimbursement for N. C. State and local sales and use taxes that the Subcontractor has paid, (2) all of the properties listed above, and on all pages, if any, added to this page, and designated on the attached invoices, are building materials, supplies, fixtures, and equipment that have become or will become a part of or annexed to a building or structure that is owned or leased by the City of Durham and is being erected, altered, or repaired for use by the City of Durham in the project named above, (3) no tax on scaffolding, tools, equipment repair parts, equipment rentals, forms for concrete, or fuel to operate machinery or equipment is included, and (4) all of the information on this form, and on all pages, if any, added to this page, is true.

signature of individual \_\_\_\_\_ typed or printed name of individual \_\_\_\_\_  
Sworn to and subscribed before me, this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

022304RW Notary Public

My commission expires:

**APPENDIX C  
STORED MATERIAL FORMS**



CITY OF DURHAM  
DEPARTMENT OF PUBLIC WORKS  
101 CITY HALL PLAZA • DURHAM, NC 27701  
919.560.4326 • fax 919.560.4316  
[www.durhamnc.gov](http://www.durhamnc.gov)

- ☐ Engineering
- ☐ Stormwater Services
- ☐ Street Maintenance
- ☐ Transportation

***AFFIDAVIT FOR PAYMENT OF STORED MATERIALS***

Contract Number: \_\_\_\_\_ Payment Request Number: \_\_\_\_\_  
Project Description & Location: \_\_\_\_\_  
Contractor: \_\_\_\_\_  
Address: \_\_\_\_\_

The contractor for the above identified contract hereby certifies and affirms that the stored materials for which payment is requested as described below have been:

- 1) Examined for compliance, and do comply, with contract requirements.
- 2) The materials have been satisfactorily stored at the following location(s):

\_\_\_\_\_  
\_\_\_\_\_

(If off site, provide company name, address, city, state, phone number of storage location)

<i>Description of Material</i>	<i>Invoice Number</i>	<i>Supplier</i>	<i>Location of Storage</i>	<i>Amount of Stored Material from Invoice</i>	<i>Amount of Stored Material Requested for Payment</i>

The contractor acknowledges that it has full and continuing responsibility to insure and protect such stored materials under the terms of its bond and insurance coverage with the City of Durham, and to maintain such stored materials in proper condition for installation, in order to fulfill the contract requirements when installed. Payment for the materials as described shall constitute a transfer of title to the City of Durham but such transfer does not relieve the contractor of the responsibility to inspect, safeguard and insure the stored materials until such time as they are incorporated into the work. Payment for the materials does not constitute the start of any warranty, either express or implied, as such action shall not begin until the installation is complete and the work accepted.

Contractor Certification: \_\_\_\_\_ Date: \_\_\_\_\_  
(Signature of authorized individual)  
Typed Name: \_\_\_\_\_  
Title: \_\_\_\_\_

**APPENDIX C  
STORED MATERIAL FORMS**

**CITY OF DURHAM STORED MATERIAL LOG**

Contract Number:  
Project:  
Contractor:

For Payment Estimate Number:  
For Period Ending:

A	B	C	D	E	F
DESCRIPTION OF MATERIAL	MATERIALS STORED FROM LAST PERIOD	NEW MATERIALS STORED THIS PERIOD	TOTAL MATERIALS STORED THIS PERIOD D=(B+C)	MATERIALS USED THIS PERIOD	MATERIALS ON HAND AT END OF PERIOD F=(D-E)
<b>TOTALS</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>

**NOTE:** This form is to be used as documentation to support the value of Stored Materials reported on the Application for Payment Detailed invoices have been provided to support the materials as described above.

**APPENDIX D**  
**STREET AND QUANTITY INFORMATION**

Priority Code	Street	TP	BLK	FROM	TO	LEN	WI	SY	LO	LN	PCR	Total Tons
1	Reigalwood	Dr.	4808	Stacy Dr.	Wensley Dr.	652	22	1,593.78	N	2	0	131.49
1	Northbury	Cir.	4816	Atterbury Ln.	Cul De Sac	432	22	1,056.00	N	2	12	87.12
1	Kendridge	Dr.	4900	Atterbury Ln.	Hideaway Ln.	459	22	1,122.00	N	2	26	92.57
1	Reigalwood	Dr.	4904	Wensley Dr.	Mohegan Dr.	598	22	1,461.78	N	2	36	120.60
1	Kendridge	Dr.	4800	Open Air Camp Rd.	Atterbury Ln.	895	22	2,187.78	N	2	46	180.49
1	Kendridge	Dr.	5000	Hideaway Ln.	Grady Dr.	415	22	1,014.44	N	2	57	83.69
2	Pinetrail	Dr.	5100	Donphil Rd.	Ponderosa Ln.	457	20	1,015.56	N	2	0	83.78
2	Pinetrail	Dr.	5024	Pine Valley Dr.	Donphil Rd.	420	20	933.33	N	2	2	77.00
2	Pinetrail	Dr.	5000	Latta Rd.	Pine Valley Dr.	619	20	1,375.56	N	2	37	113.48
2	Pinetrail	Dr.	5118	Ponderosa Ln.	Dead End	320	20	711.11	N	2	38	58.67
3	Parkview	Dr.	504	Lockhaven Dr.	Carreras Ln.	1169	22	2,857.56	N	2	2	235.75
3	Parkview	Dr.	600	Carreras Ln	Kinlock Dr.	486	22	1,188.00	N	2	17	98.01
3	Brooklane	Dr.	4606	Wildwood Dr.	Bonhill Dr.	1168	22	2,855.11	N	2	35	235.55
4	Imperial	Dr.	1500	Laurent Dr.	Memory Ln.	664	22	1,623.11	N	2	15	133.91
4	Laurent	Dr.	5300	Memory Ln.	Imperial Dr.	820	22	2,004.44	N	2	22	165.37
4	Memory	Ln.	5300	Laurent Dr.	Imperial Dr.	577	22	1,410.44	N	2	36	116.36
4	Imperial	Dr.	1310	Cul De Sac	Laurent Dr.	940	22	2,297.78	N	2	43	189.57
4	Laurent	Dr.	5400	Imperial Dr.	Cheshire Bridge Dr.	246	22	601.33	N	2	56	49.61
5	Twin Oak	Dr.	200	Natchez Way	Charleston Dr.	382	22	933.78	N	2	7	77.04
5	Deerfield	Ave.	322	Reese Rd.	Crestview Dr.	463	22	1,131.78	N	2	27	93.37
5	Twin Oak	Dr.	212	Charleston Dr.	Vicksburg Ln.	408	22	997.33	N	2	31	82.28
5	Twin Oak	Dr.	130	Plantation Dr.	Natchez Way	773	22	1,889.56	N	2	57	155.89
6	Lazy River	Ln.	4100	Cul De Sac	Shadebush Dr.	444	22	1,085.33	N	2	16	89.54
6	Berg	Pl.	2	Meadston Dr.	Cul De Sac	171	22	418.00	N	2	33	34.49
6	Meadow Lark	Pl.	100	High Meadow Rd.	Cul-de-sac	189	29	609.00	N	2	34	50.24
6	Wake Robin	Pl.	100	Omega Rd.	Cul-de-sac	157	25	436.11	N	2	34	35.98
7	Hitchcock	Dr.	2518	Camellia Dr.	Fashion Pl.	391	28	1,216.44	N	2	0	100.36
7	Camellia	Dr.	2500	Hitchcock Dr.	Bogarde St.	442	28	1,375.11	N	2	37	113.45
7	Camellia	Dr.	2406	Astor Dr.	Hitchcock Dr.	465	28	1,446.67	N	2	51	119.35
7	Camellia	Dr.	2402	Pinetree Ct.	Astor Dr.	195	28	606.67	N	2	67	50.05

**APPENDIX D**  
**STREET AND QUANTITY INFORMATION**

<b>Priority Code</b>	<b>Street</b>	<b>TP</b>	<b>BLK</b>	<b>FROM</b>	<b>TO</b>	<b>LEN</b>	<b>WI</b>	<b>SY</b>	<b>LO</b>	<b>LN</b>	<b>PCR</b>	<b>Total Tons</b>
8	Harrigan	Ct.	2	Glassgow St.	Cul De Sac	182	22	444.89	N	2	2	36.70
9	Allgood	St.	1114	Pineland Ave.	Dead End	235	28	731.11	N	2	12	60.32
10	Hammond	St.	700	Dominion St.	Lindbergh St.	697	28	2,168.44	N	2	12	178.90
11	Leon	St.	1300	N. Buchanan Blvd.	Haverford St.	713	34	2,693.56	N	2	0	222.22
11	Leon	St.	1400	Haverford St.	Broad St.	546	34	2,062.67	N	2	13	170.17
11	Leon	St.	1100	Lednum St.	N. Buchanan Blvd.	484	34	1,828.44	N	2	31	150.85
11	Leon	St.	900	Lorain Ave.	Lednum St.	586	34	2,213.78	N	2	46	182.64
12	Hudson	Ave.	1300	N. Buchanan Blvd.	Haverford St.	680	28	2,115.56	N	2	2	174.53
13	W. Wilson	St.	2500	Georgia Ave.	Hillandale Rd.	960	28	2,986.67	N	2	0	246.40
14	Kismet	Dr.	4000	Cul De Sac	Talcott Dr.	172	22	420.44	N	2	0	34.69
14	Talcott	Dr.	4000	Kismet Dr.	Westfield Dr.	395	24	1,053.33	N	2	0	86.90
14	Kismet	Dr.	4100	Talcott Dr.	Cul De Sac	316	22	772.44	N	2	20	63.73
14	Talcott	Dr.	4100	Westfield Dr.	Constitution Dr.	890	24	2,373.33	N	2	51	195.80
15	Arbor	St.	1406	W. Knox St.	Everett Pl.	324	28	1,008.00	N	2	0	83.16
15	Arbor	St.	1412	Everett Pl.	Englewood Ave.	324	28	1,008.00	N	2	7	83.16
15	Green	St.	500	Washington St.	Rand St.	866	28	2,694.22	N	2	20	222.27
15	Norton	St.	1306	W. Knox St.	Englewood Ave.	666	27	1,998.00	N	2	21	164.84
15	Norton	St.	1400	Englewood Ave.	W. Club Blvd.	729	27	2,187.00	N	2	24	180.43
15	Green	St.	308	Glendale Ave.	Edgevale Rd.	364	28	1,132.44	N	2	27	93.43
15	Green	St.	800	Ruffin St.	N. Duke St.	755	27	2,265.00	N	2	33	186.86
15	Green	St.	706	Rand St.	Ruffin St.	291	28	905.33	N	2	48	74.69
16	Anita	St.	400	Hollywood St.	Shawnee St.	293	28	911.56	N	2	19	75.20
16	Hollywood	St.	1600	Anita St.	E. Markham Ave.	610	28	1,897.78	N	2	27	156.57
16	Hargrove	St.	214	Bay St.	North St.	306	26	884.00	N	2	29	72.93
17	S. Joyland	St.	112	Holloway St.	Tuckawanna Ave.	471	28	1,465.33	N	2	0	120.89
17	Wedgedale	Ave.	2600	S. Joyland Ave.	S. Adams St.	700	28	2,177.78	N	2	0	179.67
17	S. Joyland	St.	220	Tuckawanna Ave.	Wedgedale Ave.	453	28	1,409.33	N	2	9	116.27
17	Redgate	Dr.	3400	Larch Ct.	Gibson Rd.	563	28	1,751.56	N	2	33	144.50
18	Alma	St.	1300	Juniper St.	Woodbark Ln.	208	16	369.78	N	2	7	30.51
18	Greenbriar	Rd.	1614	Fairfax Rd.	Robinhood Rd.	1032	28	3,210.67	N	2	23	264.88



**APPENDIX D**  
**STREET AND QUANTITY INFORMATION**

<b>Priority Code</b>	<b>Street</b>	<b>TP</b>	<b>BLK</b>	<b>FROM</b>	<b>TO</b>	<b>LEN</b>	<b>WI</b>	<b>SY</b>	<b>LO</b>	<b>LN</b>	<b>PCR</b>	<b>Total Tons</b>
18	Juniper	St.	1504	Alma St.	N. Guthrie Ave.	349	34	1,318.44	N	2	41	108.77
19	N. Elizabeth	St.	308	Holloway St.	Carlton Ave	385	55	2,352.78	N	2	17	194.10
19	N. Elizabeth	St.	400	Carlton Ave.	Gilbert St.	91	45	455.00	N	3	43	37.54
19	N. Elizabeth	St.	174	Taylor St.	Liberty St.	244	55	1,491.11	N	2	49	123.02
19	N. Elizabeth	St.	100	E. Main St.	Commerce St.	408	55	2,493.33	N	2	59	205.70
20	N. Holman	St.	300	Worth St.	Franklin St.	175	26	505.56	N	2	0	41.71
20	N. Holman	St.	400	Franklin St.	Wall St.	193	26	557.56	N	2	0	46.00
20	N. Holman	St.	200	Morning Glory Ave.	Worth St.	208	26	600.89	N	2	22	49.57
20	N. Holman	St.	500	Wall St.	Taylor St.	225	26	650.00	N	2	46	53.63
21	Morven	Pl.	1206	Dead End	S. Holman St.	275	12	366.67	N	2	0	30.25
21	S. Holman	St.	106	E. Main St.	Angier Ave.	458	28	1,424.89	N	2	8	117.55
21	Angier	Ave.	1008	Laurel St.	Stokes St.	450	30	1,500.00	N	2	31	123.75
21	Angier	Ave.	904	S. Elm St.	Dale St.	304	30	1,013.33	N	2	35	83.60
21	S. Holman	St.	106	E. Main St.	Morning Glory Ave.	455	28	1,415.56	N	2	36	116.78
21	Angier	Ave.	800	E. Main St.	S. Elm St.	669	35	2,601.67	N	2	48	214.64
21	Angier	Ave.	910	Dale St.	Lyon St.	130	30	433.33	N	2	48	35.75
21	Angier	Ave.	1100	Stokes St.	S. Alston Ave.	342	30	1,140.00	N	2	54	94.05
21	Angier	Ave.	1000	Lyon St.	Laurel St.	126	30	420.00	N	2	66	34.65
22	Pineburr	Pl.	600	Cul De Sac	Greyson Dr.	153	22	374.00	N	2	4	30.86
23	Goldendale	Dr.	1100	Trentwood Ct.	Yarrow Dr.	168	22	410.67	N	2	10	33.88
23	Goldendale	Dr.	1106	Yarrow Dr.	Cul De Sac	196	22	479.11	N	2	32	39.53
23	Goldendale	Dr.	900	Cul De Sac	Stanwood St.	153	22	374.00	N	2	38	30.86
23	Goldendale	Dr.	1002	Stanwood St.	Trentwood Ct.	517	22	1,263.78	N	2	42	104.26
24	Stoneybrook	Dr.	3404	Windgate Dr.	Beaver Pl.	666	28	2,072.00	N	2	0	170.94
24	Stoneybrook	Dr.	3152	Marigold Pl	W. Carver St.	313	28	973.78	N	2	45	80.34
24	Stoneybrook	Dr.	3204	W. Carver St.	Guernsdale St.	569	28	1,770.22	N	2	51	146.04
24	Stoneybrook	Dr.	3504	Beaver Pl.	Digby Pl.	1005	28	3,126.67	N	2	56	257.95
24	Stoneybrook	Dr.	3304	Guernsdale St.	Windgate Dr.	809	28	2,516.89	N	2	56	207.64
25	Logan	St.	1312	Rachel Ln.	Milan St.	541	28	1,683.11	N	2	21	138.86
25	Milan	St.	1400	Logan St.	Jessica Ct.	811	28	2,523.11	N	2	27	208.16

**APPENDIX D**  
**STREET AND QUANTITY INFORMATION**

Priority Code	Street	TP	BLK	FROM	TO	LEN	WI	SY	LO	LN	PCR	Total Tons
25	Logan	St.	1500	Faucette Ave.	Winburn Ave.	499	20	1,108.89	N	2	43	91.48
25	Logan	St.	1604	Winburn Ave.	Melrose Ave.	461	20	1,024.44	N	2	59	84.52
25	Logan	St.	1410	Christopher Ct.	Faucette Ave.	152	28	472.89	N	2	59	39.01
25	Logan	St.	1300	Joci Ct.	Rachel Ln.	284	28	883.56	N	2	61	72.89
26	CHARLES	ST	2100	S. ROXBORO ST	W. CORNWALLIS	2,070	28	6,440.00	S	2	4	531.30
26	MOLINE	ST	200	S. ROXBORO ST	BERN ST	477	26	1,378.00	S	2	28	113.69
26	MOLINE	ST	300	BERN ST	CONCORD ST	533	26	1,539.78	S	2	36	127.03
27	LODGE	ST	108	S. ROXBORO ST	SCOUT DR	401	28	1,247.56	S	2	4	102.92
27	WHITE OAK	AV	2600	W. PILOT ST	DALLAS ST	199	28	619.11	S	2	4	51.08
27	NORMADY	ST	300	DALLAS ST	S. ROXBORO ST	391	28	1,216.44	S	2	19	100.36
27	W. WEAVER	ST	200	THERESA ST	DEADEND	917	28	2,852.89	S	2	20	235.36
27	W. ALTON	ST	108	OTIS ST	THERESA ST	331	28	1,029.78	S	2	23	84.96
27	E. ALTON	ST	106	OTIS ST	JANET ST	257	28	799.56	S	2	24	65.96
27	THERESA	ST	2404	W. WEAVER ST	W. ALTON ST	442	28	1,375.11	S	2	28	113.45
27	RED OAK	AV	300	NORMANDY ST	DALLAS ST	378	28	1,176.00	S	2	33	97.02
27	E. WEAVER	ST	2500	E. ALTON ST	WAYNE CR	448	28	1,393.78	S	2	38	114.99
27	RED OAK	AV	500	FAYETTEVILLE ST	LANE ST	690	28	2,146.67	S	2	39	177.10
27	RED OAK	AV	1100	CROWELL ST	MEDINA ST	427	28	1,328.44	S	2	42	109.60
27	RED OAK	AV	200	OTIS ST	WHITE OAK AV	317	28	986.22	S	2	43	81.36
27	RED OAK	AV	602	LANE ST	DAKOTA ST	435	28	1,353.33	S	2	44	111.65
27	NORMADY	ST	204	RED OAK AV	DALLAS ST	532	28	1,655.11	S	2	47	136.55
27	RED OAK	AV	206	WHITE OAK AV	NORMANDY ST	381	28	1,185.33	S	2	48	97.79
27	E. ALTON	ST	300	E. WEAVER ST	CUL DE SAC	459	28	1,428.00	S	2	51	117.81
27	W. WEAVER	ST	100	OTIS ST	THERESA ST	329	28	1,023.56	S	2	52	84.44
27	WHITE OAK	AV	2608	DALLAS ST	DEADEND	90	28	280.00	S	2	57	23.10
27	E.WEAVER	ST	2512	WAYNE CR	E. PILOT ST	391	28	1,216.44	S	2	58	100.36
28	LINCOLN	ST	2202	MARTHA ST	BURLINGTON AV	394	28	1,225.78	S	2	5	101.13
28	LINCOLN	ST	2100	CECIL ST	MARTHA ST	312	28	970.67	S	2	11	80.08
28	LINCOLN	ST	1700	DUPREE ST	E. LAWSON ST	372	30	1,240.00	S	2	29	102.30

**APPENDIX D**  
**STREET AND QUANTITY INFORMATION**

Priority Code	Street	TP	BLK	FROM	TO	LEN	WI	SY	LO	LN	PCR	Total Tons
28	LINCOLN	ST	2400	HOPE AV	DAKOTA ST	569	28	1,770.22	S	2	36	146.04
28	LINCOLN	ST	2300	BURLINGTON AV	HOPE AV	339	28	1,054.67	S	2	47	87.01
29	ROOSEVELT	ST	500	FAYETTEVILLE ST	LANE ST	688	28	2,140.44	S	2	0	176.59
29	UTAH	ST	400	FAYETTEVILLE ST	ATLANTIC ST	349	28	1,085.78	S	2	10	89.58
29	ATLANTIC	ST	2508	COLUMBIA AV	RED OAK AV	1,147	28	3,568.44	S	2	11	294.40
30	DELRAY	ST	822	ANCROFT AV	DEADEND	167	28	519.56	S	2	2	42.86
30	DELRAY	ST	1000	ANCROFT AV	ZEPHER PL	648	28	2,016.00	S	2	6	166.32
30	ZEPHER	PL	2	CUL DE SAC	DELRAY ST	154	28	479.11	S	2	7	39.53
30	DELRAY	ST	900	ZEPHER PL	ANCROFT AV	312	28	970.67	S	2	12	80.08
30	ANCROFT	AV	1000	DELRAY ST	DELRAY ST	606	28	1,885.33	S	2	26	155.54
30	BRANDON	RD	800	LANSING AV	CHOWAN AV	1,143	20	2,540.00	S	2	27	209.55
30	HARRINGTON	PL	2	KIRBY ST	CUL DE SAC	278	20	617.78	S	2	30	50.97
30	KIRBY	ST	2700	DEADEND	JEROME RD	139	20	308.89	S	2	37	25.48
30	ANCROFT	AV	1100	DELRAY ST	RIDDLE RD	237	28	737.33	S	2	48	60.83
31	BALTIC	AV	2106	CAPPS ST	CROWELL ST	655	28	2,037.78	S	2	10	168.12
31	NIXON	ST	1800	ATHENS AV	DEADEND	666	28	2,072.00	S	2	21	170.94
31	MATILENE	AV	2000	HEARTHSIDE ST	CAPPS ST	722	28	2,246.22	S	2	22	185.31
31	LANTERN	PL	1500	BACON ST	POMONA DR	293	28	911.56	S	2	26	75.20
31	EMERSON	PL	2200	CROWELL ST	CHICAGO ST	776	28	2,414.22	S	2	27	199.17
31	BACON	ST	1508	HEARTHSIDE ST	LANTERN PL	255	28	793.33	S	2	28	65.45
31	HEARTHSIDE	ST	1100	BACON ST	SARGENT PL	756	28	2,352.00	S	2	32	194.04
31	HEARTHSIDE	ST	1522	MATILENE AV	ATHENS AV	295	28	917.78	S	2	32	75.72
31	HEARTHSIDE	ST	1216	WELCH PL	BACON ST	497	28	1,546.22	S	2	43	127.56
31	NIXON	ST	1526	PRITCHARD PL	S. ALSTON AV	954	28	2,968.00	S	2	49	244.86
31	HEARTHSIDE	ST	1300	BACON ST	SAVANNAH AV	838	28	2,607.11	S	2	53	215.09
31	EMERSON	PL	2200	CHICAGO ST	WINTERGREEN PL	107	28	332.89	S	2	57	27.46
31	HEARTHSIDE	ST	1200	SARGENT PL	WELCH PL	338	28	1,051.56	S	2	57	86.75
32	PINECREST	RD	1600	SEVIER ST	MARION AV	453	28	1,409.33	S	2	8	116.27

**APPENDIX D**  
**STREET AND QUANTITY INFORMATION**

32	WOODBURN	RD	1500	SEVIER ST	SPENCER ST	488	28	1,518.22	S	2	11	125.25
<b>Priority Code</b>	<b>Street</b>	<b>TP</b>	<b>BLK</b>	<b>FROM</b>	<b>TO</b>	<b>LEN</b>	<b>WI</b>	<b>SY</b>	<b>LO</b>	<b>LN</b>	<b>PCR</b>	<b>Total Tons</b>
32	WOODBURN	RD	1726	WOODBURN RD	WOODBURN RD	319	28	992.44	S	2	21	81.88
32	DEKALB	ST	2800	W. CORNWALLIS RD	MCDOWELL RD	777	28	2,417.33	S	2	23	199.43
32	WOODBURN	RD	1600	SPENCER ST	MONTGOMERY ST	426	28	1,325.33	S	2	26	109.34
32	SEVIER	ST	2500	PINECREST RD	MARION AV	1,079	28	3,356.89	S	2	28	276.94
32	SEVIER	ST	2606	MARION AV	WOODBURN RD	394	28	1,225.78	S	2	37	101.13
32	WOODBURN	RD	1700	MONTGOMERY ST	WOODBURN RD	413	28	1,284.89	S	2	41	106.00
33	ROLLING MEADOWS	DR	5000	CUL DE SAC	BONHAM CT	445	22	1,087.78	S	2	0	89.74
34	HUNTSMAN	DR	1100	LITTLE CREEK RD	AUBURNDALE DR	1,228	22	3,001.78	S	2	0	247.65
34	HUNTSMAN	DR	918	BOUNTY LN	LITTLE CREEK	844	22	2,063.11	S	2	15	170.21
34	HUNTSMAN	DR	804	GRANDALE DR	BOUNTY LN	870	22	2,126.67	S	2	57	175.45
35	BURBANK	CR	2	EUCLID RD	EUCLID RD	400	21	933.33	S	2	7	77.00
35	EUCLID	RD	1804	EMERALD CR	EMERALD CR	594	23	1,518.00	S	2	15	125.24
35	HALEDON	CR	2	REVERE RD	REVERE RD	475	21	1,108.33	S	2	22	91.44
35	EMERALD	CR	100	EUCLID RD	EUCLID RD	1,697	23	4,336.78	S	2	31	357.78
35	CLERMONT	RD	1400	PELHAM RD	NEWHALL RD	565	28	1,757.78	S	2	32	145.02
35	CLERMONT	RD	1500	REVERE RD	EUCLID RD	1,163	28	3,618.22	S	2	33	298.50
35	CLERMONT	RD	1422	NEWHALL RD	REVERE RD	883	28	2,747.11	S	2	38	226.64
35	EUCLID	RD	1500	REVERE RD	BURBANK CR	317	28	986.22	S	2	38	81.36
35	EUCLID	RD	1850	EMERALD CR	CLERMONT RD	308	23	787.11	S	2	41	64.94
35	EUCLID	RD	1700	BRENTWOOD RD	CUSTER CR	141	26	407.33	S	2	63	33.61
35	EUCLID	RD	1530	PUTNAM LN	BLANCHARD RD	406	26	1,172.89	S	2	71	96.76
36	LATTIMORE	LN	100	BRENTWOOD RD	CIRCLE	798	23	2,039.33	S	2	0	168.25
36	SINNOTT	CR	2	BRENTWOOD RD	BRENTWOOD RD	995	23	2,542.78	S	2	0	209.78
36	TRAVIS	CR	4	REVERE RD	REVERE RD	499	21	1,164.33	S	2	0	96.06
36	BRENTWOOD	RD	4914	SPEARS LN	REVERE RD	459	26	1,326.00	S	2	26	109.40
36	BRENTWOOD	RD	4700	EUCLID RD	LATTIMORE LN	348	26	1,005.33	S	2	31	82.94

**APPENDIX D**  
**STREET AND QUANTITY INFORMATION**

36	BRENTWOOD	RD	4812	SINNOTT CR	SINNOTT CR	264	26	762.67	S	2	55	62.92
Priority Code	Street	TP	BLK	FROM	TO	LEN	WI	SY	LO	LN	PCR	Total Tons
36	BRENTWOOD	RD	4908	SINNOTT CR	SPEARS LN	579	26	1,672.67	S	2	61	138.00
37	WATAUGA	CT	2	MCCORMICK RD	CUL DE SAC	162	28	504.00	S	2	5	41.58
37	TIPPERARY	CT	6	MCCORMICK RD	CUL DE SAC	543	22	1,327.33	S	2	6	109.51
37	KILKENNY	CT	8	MCCORMICK RD	CUL DE SAC	283	28	880.44	S	2	26	72.64
37	TIMMONS	DR	5000	MCCORMICK RD	MCCORMICK RD	1,064	28	3,310.22	S	2	31	273.09
37	DONNYBROOK	CT	6	MCCORMICK RD	CUL DE SAC	343	22	838.44	S	2	37	69.17
38	MONTEREY	LN	102	CUL DE SAC	PELHAM RD	652	23	1,666.22	S	2	0	137.46
39	NEWHALL	RD	5700	SEDWICK RD	SHAMROCK RD	264	28	821.33	S	2	17	67.76
39	NEWHALL	RD	5800	SHAMROCK RD	ELMSET LN	868	28	2,700.44	S	2	31	222.79
40	GATESWAY	CT	2	COTTONWOOD DR	CUL DE SAC	102	22	249.33	S	2	21	20.57
41	BEECHAM	WY	1400	DOWNING CREEK P	TANYARD PL	294	22	718.67	S	2	22	59.29
41	BENWICK	CT	2	BEARKLING PL	CUL DE SAC	197	22	481.56	S	2	26	39.73
41	TANYARD	PL	2	BEECHAM WY	CUL DE SAC	246	22	601.33	S	2	27	49.61
41	DUNMORE	PL	1784	BELFAIR WY	CUL DE SAC	140	22	342.22	S	2	36	28.23
41	BEECHAM	WY	1484	TANYARD PL	CUL DE SAC	153	22	374.00	S	2	37	30.86
41	HUNTINGRIDGE	RD	6300	TOTTENHAM LN	FALCONBRIDGE RD	289	30	963.33	S	2	38	79.48
41	HUNTINGRIDGE	RD	6200	BROOKHOLLOW LN	TOTTENHAM LN	688	30	2,293.33	S	2	46	189.20
41	DUNMORE	PL	1778	KILLINGTON CT	BELFAIR WY	270	22	660.00	S	2	47	54.45
41	DUNMORE	PL	1774	DOWNING CREEK P	KILLINGTON CT	199	22	486.44	S	2	48	40.13
41	HUNTINGRIDGE	RD	6800	RIDGEFIELD DR	KNOTTY PINE DR	609	30	2,030.00	S	2	58	167.48

TOTAL 23,297.13

## SUBMITTAL REGISTER - ATTACHMENT A

ION

[illegible]

**APPENDIX E  
SUBMITTAL REGISTER AND TRANSMITTAL FORM**

PROJECT:	
SPEC. SECTION:	
CONTRACT NO.	

SUBMITTAL REGISTER  
ATTACHMENT A

SHEET NO. 1 OF 1

CONTRACT NO.									Contractor Schedule Data						CITY Data			
									Construction Activity	Review Period (Days)	Approval Needed By Date	Material Purchase Period (Days)	Scheduled Submittal Date	Contractor Action Code	Actual Submit Date	CITY OF DURHAM Action Code	CITY OF DURHAM Approval Date	Comments / Remarks / Other Follow-Up
Item No.	Transmittal Number	Specification or Plan Reference	Submittal Item Description	Type of Submittal	Review Level (CONT. Or CITY)	CITY Review Office	Activity No.	Planned Start Date										
a	b	c	D	e	f	g	h	i	j	k	l	m	n	o	p	q	r	
		City	Performance Bond		City													
			Payment Bond		City													
			Insurance Certificate		City													
			Superintendent		City													
			Submittal Register		City													
			Progress Schedule		City													
			Quality Control Manger		City													
			Quality Control Plan		City													
		NCDOT 500	Subgrade Density		Cont													
		510	Subgrade Stabilization		Cont													
		520	ABC Acceptance Test		Cont													
			ABC Gradation		Cont													
			ABC Density		City													
		535	Conditioning ABC		Cont													

**APPENDIX E  
SUBMITTAL REGISTER AND TRANSMITTAL FORM**

PROJECT:	
SPEC. SECTION:	
CONTRACT NO.	

SUBMITTAL REGISTER  
ATTACHMENT A

SHEET NO. 2 OF

CONTRACT NO.																	
								Contractor Schedule Data							CITY Data		
Item No.	Transmittal Number	Specification or Plan Reference	Submittal Item Description	Type of Submittal	Review Level (CONT. Or CITY)	CITY Review Office	Construction Activity		Review Period (Days)	Approval Needed By Date	Material Purchase Period (Days)	Scheduled Submittal Date	Contractor Action Code	Actual Submit Date	CITY OF DURHAM Action Code	CITY OF DURHAM Approval Date	Comments / Remarks / Other Follow-Up
							Activity No.	Planned Start Date									
a	b	c	D	e	f	g	h	i	j	k	l	m	n	o	p	q	r
		NCDOT 607	Milling Equipment		Cont												
		609	Quality Control Plan		City												
			Laboratory Certification		City												
			Testing Schedule		City												
			Personnel Qualifications		City												
		610	Asphalt Aggregates		Cont												
			Asphalt Binder		Cont												
			Mix Additives		Cont												
			Mix Designs		City												
			Asphalt Plant Certification		City												
			Paving Equipment		Cont												
			Density Results		City												
		620	Materials		Cont												



**APPENDIX E  
SUBMITTAL REGISTER AND TRANSMITTAL FORM**

PROJECT:	
SPEC. SECTION:	
CONTRACT NO.	

SUBMITTAL REGISTER  
ATTACHMENT A

SHEET NO. 3 OF

CONTRACT NO.																	
									Contractor Schedule Data						CITY Data		
Item No.	Transmittal Number	Specification or Plan Reference	Submittal Item Description	Type of Submittal	Review Level (CONT. Or CITY)	CITY Review Office	Construction Activity		Review Period (Days)	Approval Needed By Date	Material Purchase Period (Days)	Scheduled Submittal Date	Contractor Action Code	Actual Submit Date	CITY OF DURHAM Action Code	CITY OF DURHAM Approval Date	Comments / Remarks / Other Follow-Up
							Activity No.	Planned Start Date									
a	b	c	D	e	f	g	h	i	j	k	l	m	n	o	p	q	r
		NCDOT 840	Mix Design		City												
		846	Mix Design		City												
		848	Mix Design		City												
		852	Mix Design		City												
		1000	Materials		Cont												
		1101	Work Zone Traffic Plan		City												
			Personnel Qualifications		Cont												
			Control Devices		Cont												
			Signs, Barricades, Lights		Cont												

**APPENDIX E**  
**SUBMITTAL REGISTER AND TRANSMITTAL FORM**

**ATTACHMENT B – INSTRUCTIONS FOR COMPLETION OF SUBMITTAL REGISTER**

NOTE: Complete a separate Submittal Register sheet (**Attachment A**) for each different specification section requiring submittals. The following column notes refer to column numbers on the Submittal Register sheets. These instructions apply to the completion of the initial register and the maintenance of the register as items are submitted.

**Column (a)** Enter the identifying item number. The first item under a given specification section shall be numbered 1, the second 2 and so on.

**Column (b)** Enter the Transmittal Number under which the submittal was made. This will be blank until a transmittal is actually forwarded for review. The transmittal has the following A-B.C format, where:

- A is the **contract section** under which submitted
- B is the **consecutive number** where 1 would be the first transmittal under that section, 2 would be the second transmittal under that given section, etc.
- C is the number identifying re-submittals, 1 is the 1st re-submittal, 2 is the 2nd re-submittal, etc.

Examples of Transmittal Numbers under Specification section NCDOT 0520 follow:

A-B Format: 0520-1 (first submittal in section 0520)

A-B Format: 0520-2 (second submittal in section 0520)

A-B.C Format: 0520-1.1 (first re-submittal of 0520-1)

**Column (c)** Enter the specification paragraph number or plan reference if applicable.

**Column (d)** Enter a general description of the item.

**Column (e)** Enter an abbreviation for type of submittal from the following list:

<u>Abbreviation</u>	<u>Full Name</u>	<u>Abbreviation</u>	<u>Full Name</u>
DTA	Data	RPT	Reports
SD	Shop Drawing	CRT	Certificates
INS	Instructions	SAM	Samples
SCH	Schedules	REC	Records
STA	Statements	O&M	O&M Manuals

**Column (f)** Enter the submittal item review classification. Enter CONT for Contractor Approved submittal items that are forwarded to the City “For Information Only”. Enter CITY for “City Approved” items.

**Column (g)** Enter City review office for CITY approved items. Use PWE for Public Works Engineering.

**Column (h)** Enter the Activity Number as shown on the construction schedule that requires this item to be submitted. In the case where an item applies to more than one activity, enter the activity number of the activity with the earliest planned start date. This is completed by the contractor.

**Column (i)** Enter the planned start work date for the Activity identified in column (h). This is completed by the contractor from their construction schedule.

**Column (j)** This applies to items that require CITY review and approval. Enter the number of days allowed for mailing to the CITY (Minimum of 3 days), review by the CITY (Typically 15 days minimum – see specifications for minimum requirements where different), and return mail from the CITY to the contractor (minimum 3 days). Enter 0 for FIO type submittal items.

**Column (k)** This is the date approval is needed in order to have materials ordered and delivered to meet the scheduled start work date.

**Column (l)** This applies if material procurement lead time is required. Enter the number of days required to order, fabricate and deliver the materials after approval to meet the schedule. The manufacturer and supplier shall assist the contractor in this assessment.

**Column (m)** Enter the scheduled date for submission to the CITY. This is to be coordinated with the start date of the activity identified in column (h). This is the needed by date – the material procurement lead time after approval – approval and review period time.

**Column (n)** Enter the approval action code given to the item by the contractor CQC manager.

**Column (o)** Enter the actual date of approval by the contractor CQC manager.

**Column (p)** Enter the CITY approval action code.

**Column (q)** Enter the CITY approval action code date.

**Column (r)** Enter any comments or action considered necessary.

**APPENDIX F  
SKETCHES  
ST-226-1 through ST-226-7**

## PAVEMENT SCHEDULE

A-1	PROPOSED APPROXIMATELY 1- $\frac{1}{2}$ " ASPHALT CONCRETE SURFACE COURSE TYPE S9.5B, AT A AVERAGE RATE OF 140 LBS PER SQ YD.
**B-1	PROPOSED APPROXIMATELY 2- $\frac{1}{2}$ " ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I 19.0B, AT AN AVERAGE RATE OF 285 LBS PER SQ. YD.
**C-1	PROPOSED APPROXIMATELY 6" ASPHALT CONCRETE BASE COURSE, TYPE B25.0 B, AT AN AVERAGE RATE OF 684 LBS. PER SQ. YD.
**D-1	PROPOSED APPROXIMATELY 8" AGGREGATE BASE COURSE,
**	DEPTH DETERMINED BASED ON FIELD CONDITIONS. THE ENGINEER MAY ELIMINATE VARIOUS PAVEMENT LAYERS BASED ON FIELD CONDITIONS AND/OR REVISE THE PAVEMENT LAYER THICKNESS.
U-1	EXISTING PAVEMENT STRUCTURE. THICKNESS UNKNOWN



DATE:  
JANUARY 2006

REVISED:

### PAVEMENT SCHEDULE

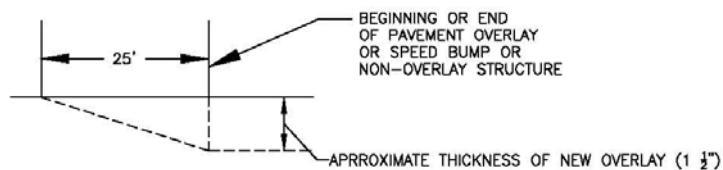
CITY OF DURHAM, NORTH CAROLINA  
DEPARTMENT OF PUBLIC WORKS

SCALE:  
NONE

SKETCH NO.  
ST-226-1

**APPENDIX F  
SKETCHES  
ST-226-1 through ST-226-7**

MILL EXISTING PAVEMENT DOWN TO ALLOW MATCH TO THE EXISTING PAVEMENT AND ENSURE SMOOTH TRAVEL



NOTE: MILLED AREA TO BE WEDGED IF  
NOT OVERLAIN THE SAME DAY AS THE  
MILLING OPERATION

**BRIDGE & CULVERT STRUCTURES**

1. NO DRAINS IN BRIDGE OR BOX CULVERT ARE TO BE BLOCKED. ALL DRAINS ARE TO BE OPEN.
2. THE ENGINEER WILL FIELD DETERMINE IF BRIDGES AND STRUCTURES ARE TO BE RESURFACED OR ARE TO BE MILLED PRIOR TO BEING RESURFACED.



DATE:  
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**PAVEMENT TRANSITION  
DETAILS**

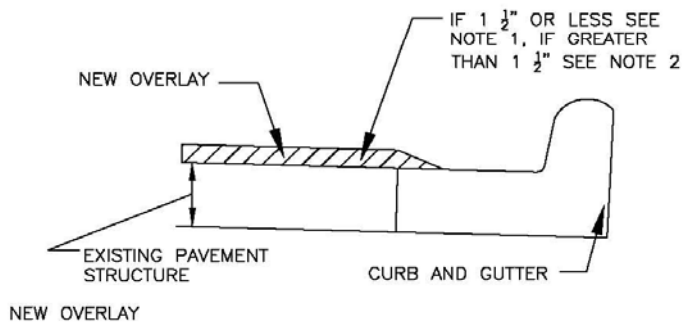
CITY OF DURHAM, NORTH CAROLINA  
DEPARTMENT OF PUBLIC WORKS

SCALE:  
NONE

SKETCH NO.  
ST-226-2

**APPENDIX F  
SKETCHES  
ST-226-1 through ST-226-7**

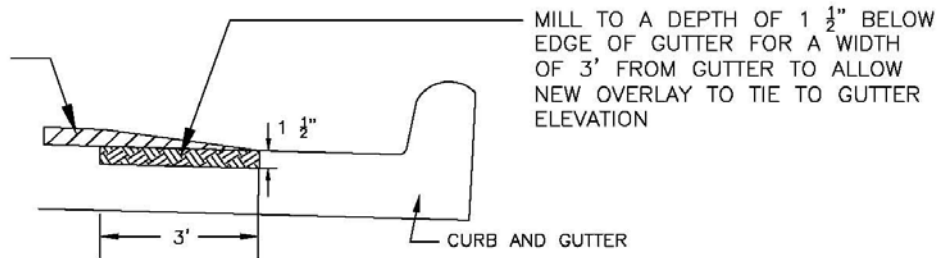
**EDGE TREATMENT CONDITIONS**



**NOTES:**

- ① IF OVERLAY RESULTS IN AN ELEVATION DIFFERENCE ABOVE THE GUTTER ELEVATION, EDGE MAY BE TAPERED AS SHOWN.
- ② IF OVERLAY RESULTS IN AN ELEVATION DIFFERENCE ABOVE THE GUTTER ELEVATION, PERFORM MILLING AS SHOWN.

**MILLING**



DATE:  
JANUARY 2006

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**EDGE TREATMENT  
DETAILS**

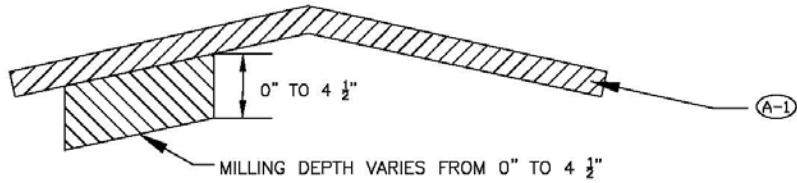
CITY OF DURHAM, NORTH CAROLINA  
DEPARTMENT OF PUBLIC WORKS

SCALE:  
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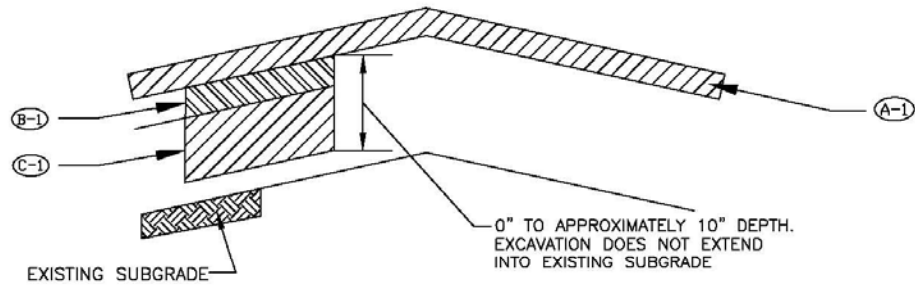
SKETCH NO.  
ST-226-3

**APPENDIX F  
SKETCHES  
ST-226-1 through ST-226-7**

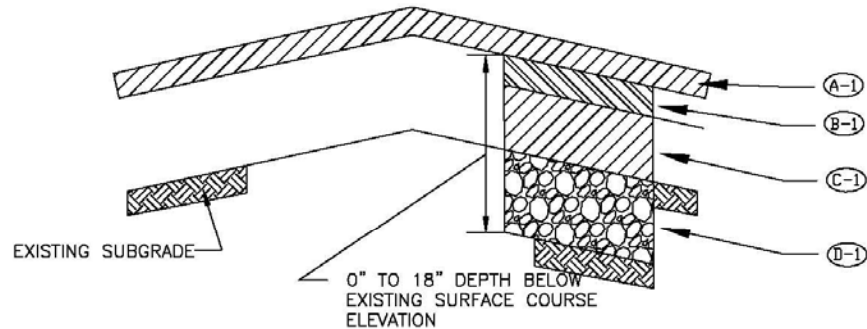
**MILLING REPAIRS**



**PARTIAL DEPTH REPAIRS (SEE DETAIL NOTES)**



**FULL DEPTH REPAIRS (SEE DETAIL NOTES)**



DATE:  
JANUARY 2006

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**TYPICAL REPAIR SECTION  
DETAILS**

CITY OF DURHAM, NORTH CAROLINA  
DEPARTMENT OF PUBLIC WORKS

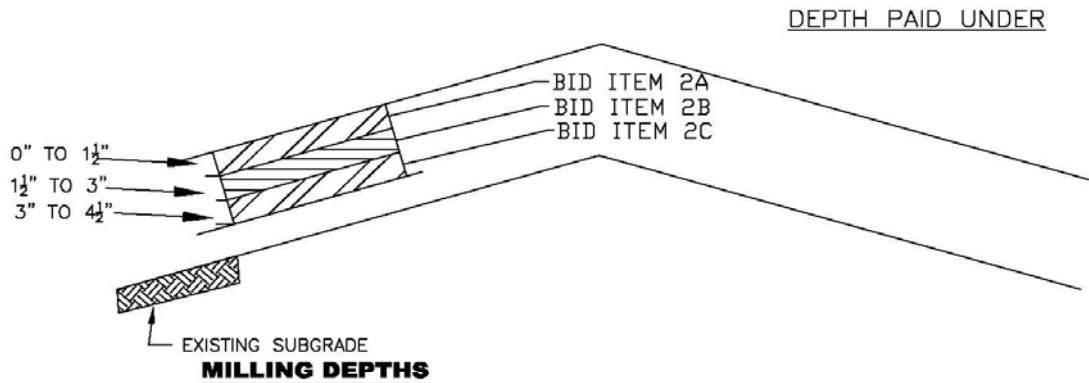
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SKETCH NO.  
ST-226-4

**APPENDIX F  
SKETCHES  
ST-226-1 through ST-226-7**

**MILLING NOTES**

1. MILLING TO BE PERFORMED PER NCDOT SECTION 207 AS AMENDED BY THESE SPECIFICATIONS
2. MILLING WILL BE PERFORMED UNDER BID ITEMS FOR MILLING DEPTHS OF 0"-1½", 1½"- 3", AND 3" TO 4½" AS OUTLINED IN THE SPECIFICATIONS AND NOTED HEREIN.



**NOTES:**

1. THE CONTRACTOR WILL NOT BE PAID UNDER BID ITEM 2a AND 2B FOR MILLING PERFORMED IN RANGE OF 1½" - 3". ALL WORK FOR MILLING TO THE DEPTH OF 1½" - 3" IS INCLUDED IN THE BID ITEM 2B.
2. THE CONTRACTOR WILL NOT BE PAID UNDER BID ITEM 2A, 2B, AND 2C FOR MILLING PERFORMED IN THE RANGE OF 3" - 4½". ALL WORK FOR MILLING TO DEPTH OF 3" - 4½" IS INCLUDED UNDER BID ITEM 2C.



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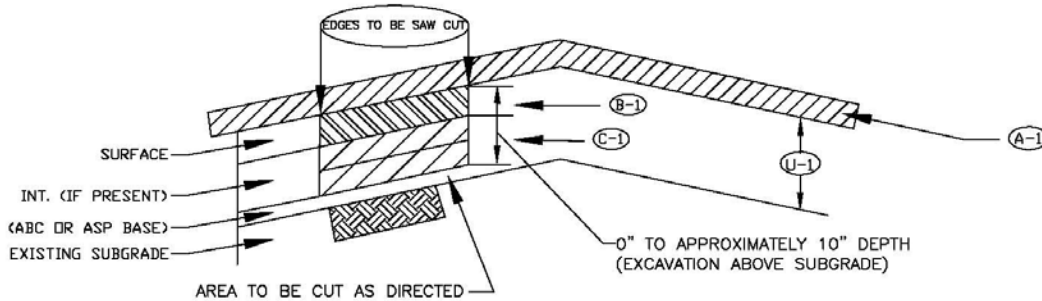
**MILLING DETAILS AND  
NOTES**

CITY OF DURHAM, NORTH CAROLINA  
DEPARTMENT OF PUBLIC WORKS

SCALE:  
NONE

SKETCH NO.  
ST-226-5

**APPENDIX F  
SKETCHES  
ST-226-1 through ST-226-7**



- (A-1) NEW 1- $\frac{1}{2}$ " OVERLAY SURFACE COURSE.
- (B-1) THE ENGINEER MAY ELECT TO USE A LAYER(S) OF INTERMEDIATE ASPHALT MATERIAL OR SURFACE COURSE MATERIAL TO BRING THE REPAIR TO EXISTING PAVEMENT ELEVATION PRIOR TO PERFORMING THE PLACEMENT OF THE NEW SURFACE OVERLAY.
- (C-1) PLACE A LAYER(S) OF ASPHALT CONCRETE BASE COURSE AS DIRECTED BY THE ENGINEER. DEPTH WILL GENERALLY VARY FROM 4" - 6".
- (U-1) EXISTING PAVEMENT STRUCTURE, THICKNESS UNKNOWN

**NOTES:**

WORK TO BE INCLUDED IN THE FULL DEPTH  
REPAIR CONSIST OF THE FOLLOWING:

- ① SAW CUT AREAS OF REPAIR. EXCAVATE AND REMOVE THE EXISTING MATERIALS TO A DEPTH AS DETERMINED IN THE FIELD BY THE ENGINEER.
- ② EXCAVATE AND REMOVE THE EXISTING MATERIALS TO A DEPTH AS DETERMINED IN THE FIELD BY THE ENGINEER
- ③ PREPARE THE EXISTING PAVEMENT STRUCTURE TO PROVIDE ADEQUATE SUPPORT FOR THE NEW PAVEMENT STRUCTURE.
- ④ CONSTRUCT NEW PAVEMENT STRUCTURE AS NOTED BY THE DETAILS AND RECOMMENDED BY THE ENGINEER
- ⑤ MEASUREMENT AND PAYMENT FOR ALL WORK ASSOCIATED WITH THE PAVEMENT STRUCTURE CUTTING AND REMOVAL, SUBGRADE STABILIZATION, AND MATERIAL DISPOSAL SHALL BE INCLUDED IN THE PRICE BID PER SQ YD FOR PARTIAL DEPTH REPAIRS UP TO 10" DEPTH AS NOTED.



DATE:  
JANUARY 2006

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**PARTIAL DEPTH REPAIR SECTION  
NOTES**

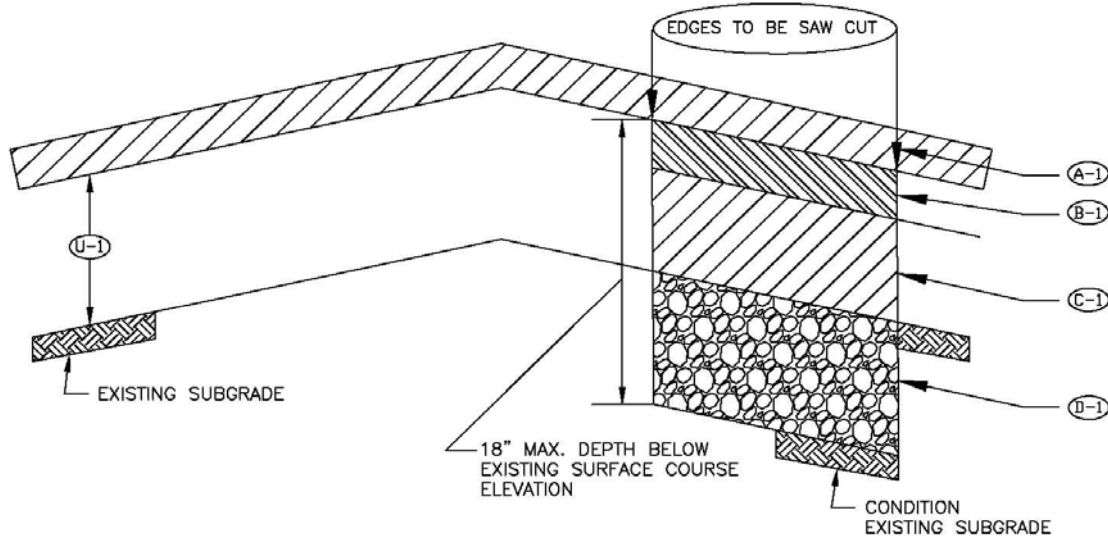
CITY OF DURHAM, NORTH CAROLINA  
DEPARTMENT OF PUBLIC WORKS

SCALE:  
NONE

SKETCH NO.  
ST-226-6



**APPENDIX F  
SKETCHES  
ST-226-1 through ST-226-7**



- (A-1) NEW 1- $\frac{1}{2}$ " OVERLAY SURFACE COURSE.
- (B-1) NEW (APPROXIMATELY) 2- $\frac{1}{2}$ " INTERMEDIATE COURSE. THE ENGINEER MAY ELECT TO ELIMINATE OR REVISE THE THICKNESS OF THIS LAYER BASED UPON FIELD CONDITIONS AND TRAFFIC CONCERNS.
- (C-1) NEW (APPROXIMATELY) 6" ASPHALT BASE COURSE. THE ENGINEER MAY ELECT TO ELIMINATE OR REVISE THE THICKNESS OF THIS LAYER BASED UPON FIELD CONDITIONS AND TRAFFIC CONCERNS.
- (D-1) THE EXISTING SUBGRADE IS TO BE CONDITIONED AND STABILIZED IN ACCORDANCE WITH NCDOT STANDARD 510, 520, AND/OR 535. THE EXISTING PAVEMENT STRUCTURE MATERIALS MAY BE RE-USED IN THE STABILIZATION AND REPAIR IF SATISFACTORY AND SUITABLE FOR RE-USE. IF REQUIRED DUE TO FIELD CONDITIONS, NEW AGGREGATE BASE MATERIALS MAY BE USED IN DEPTH RANGING FROM 4 TO 10 INCHES. THE MATERIALS ARE TO BE USED TO PROVIDE SATISFACTORY FOUNDATION SUBGRADE FOR THE REPAIR PAVEMENT STRUCTURE.
- (U-1) EXISTING PAVEMENT STRUCTURE, THICKNESS UNKNOWN

**NOTES:**

WORK TO BE INCLUDED IN THE FULL DEPTH REPAIR CONSIST OF THE FOLLOWING:

- ① SAW CUT AREAS OF REPAIR. EXCAVATE AND REMOVE THE EXISTING MATERIALS TO A DEPTH AS DETERMINED IN THE FIELD BY THE ENGINEER.
- ② EXCAVATE AND REMOVE THE EXISTING MATERIALS TO A DEPTH AS DETERMINED IN THE FIELD BY THE ENGINEER
- ③ SATISFACTORY EXCAVATED MATERIALS THAT ARE SUITABLE FOR THE SUBGRADE AND PAVEMENT STRUCTURE REPAIR ARE TO BE STOCK PILED AND RE-USED IN THE RECONSTRUCTION. UNSATISFACTORY OR UNSUITABLE MATERIALS ARE TO BE REMOVED AND DISPOSED OF BY THE CONTRACTOR.
- ④ COMPACT AND/OR CONDITION THE SUBGRADE TO A DENSITY AS NOTED IN THE NCDOT STANDARD FOR SUBGRADE COMPACTION, CONDITIONING OR STABILIZATION AS APPROPRIATE.
- ⑤ CONSTRUCT NEW PAVEMENT STRUCTURE AS NOTED BY THE DETAILS AND RECOMMENDED BY THE ENGINEER
- ⑥ MEASUREMENT AND PAYMENT FOR ALL WORK ASSOCIATED WITH THE PAVEMENT STRUCTURE CUTTING AND REMOVAL, SUBGRADE CONDITIONING, AND STABILIZING MATERIAL RE-USE AND DISPOSAL SHALL BE INCLUDED IN THE PRICE BID PER SQ YD FOR FULL DEPTH REPAIRS UP TO 18" DEPTH AS NOTED.



DATE:  
JANUARY 2006

REVISED:

**FULL DEPTH REPAIR  
SECTION NOTES**

CITY OF DURHAM, NORTH CAROLINA  
DEPARTMENT OF PUBLIC WORKS

SCALE:  
NONE

SKETCH NO.  
ST-226-7